150,541

RECORD, CASE No. 13,856.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1892.

TERM No., ~~246~~ 27

JOHN H. GORDON; MARY A. GORDON, AS EXECUTRIX OF JAMES F. GORDON, DECEASED; AND ELIZA W. OSBORNE, FREDERICK HARRIS, AND THOMAS M. OSBORNE, EXECUTORS OF DAVID M. OSBORNE, DECEASED, APPELLANTS,

vs.

WHITELEY, FASSLER & KELLY.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF OHIO.

FILED OCTOBER 21, 1889.

46 [Endorsed:] 7,6,'89. United States circuit court, southern district of Ohio. In equity. John H. Gordon & o'rs against The Champion Machine Company. #3695. Citation on appeal to the Supreme Court of the United States. Esek Cowen, counsel for complainants and appellants, 25 North Pearl street, Albany, N. Y. Filed Jul. 27, 1889. B. R. Cowen.

Received this writ at Cincinnati, Ohio, on the 6th day of July, 1889, and on the 16th day of July, 1889, at Springfield, Ohio, I served the within-named The Champion Machine Company, a corporation, by handing to Amos Whiteley, the president, and to B. H. Whiteley, secretary, respectively, of said corporation, each personally a true copy of this writ, having all the endorsements thereon.

J. H. SIMMONS, *U. S. Marshal.*
By CHAS. A. COSTELLO, *Deputy.*

2 services	1 00
2 copies	1 00
88 miles	5 28
	$10 28

Endorsed on cover: Case No. 13,855. S. Ohio C. C. U. S. No. 245. John H. Gordon, Mary A. Gordon, executrix of James F. Gordon, deceased, and Eliza W. Osborne, Frederick Harris and Thomas M. Osborne, executors of David M. Osborne, deceased, appellants, *vs.* The Champion Machine Company. Filed October 21, 1889.

150547

RECORD, CASE No. 13,856.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1892.

TERM No., ~~246~~ 37

JOHN H. GORDON; MARY A. GORDON, AS EXECUTRIX OF JAMES F. GORDON, DECEASED; AND ELIZA W. OSBORNE, FREDERICK HARRIS, AND THOMAS M. OSBORNE, EXECUTORS OF DAVID M. OSBORNE, DECEASED, APPELLANTS,

vs.

WHITELEY, FASSLER & KELLY.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF OHIO.

FILED OCTOBER 21, 1889.

RECORD, CASE No. 13,856.

SUPREME COURT OF THE UNITED STATES.

OCTOBER TERM, 1892.

TERM No., 246.

JOHN H. GORDON; MARY A. GORDON, EXECUTRIX OF JAMES F. GORDON, DECEASED; AND ELIZA W. OSBORNE, FREDERICK HARRIS, AND THOMAS M. OSBORNE, EXECUTORS OF DAVID M. OSBORNE, DECEASED, APPELLANTS,

vs.

WHITELEY, FASSLER & KELLY.

APPEAL FROM THE CIRCUIT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF OHIO.

INDEX.

	Original.	Print.
Caption	1	1
Bill of complaint	2	1
Subpœna	13	6
Marshal's return	14	7
Answer	15	7
Replication	25	8
Bill of revivor	26	13
Order reviving cause, &c.	32	17
Appearance for defendants	33	17

JUDD & DETWEILER, PRINTERS, WASHINGTON, D. C., NOVEMBER 12, 1892.

	Original.	Print.
Request for substitution of solicitors	33	18
Final decree	34	18
Petition of appeal	34	18
Appeal bond	37	20
Order substituting new appeal bond	39	21
Appeal bond	39	21
Stipulation as to use of evidence in four cases	42	22
Clerk's certificate	44	23
Citation and return	45	23

1 THE UNITED STATES OF AMERICA, } ss:
Southern District of Ohio, Western Division, }

At a stated term of the circuit court of the United States of America within and for the western division of the southern district of Ohio, in the sixth judicial circuit of the United States of America, begun and had in the court-rooms, at the city of Cincinnati, Ohio, in said district, on the first Tuesday of April, being also the second day of the month, in the year of our Lord one thousand eight hundred and eighty-nine, and of the Independence of the United States of America the one hundred and thirteenth—present, the Honorable George R. Sage, district judge—among the proceedings had were the following to wit:

JAMES A. GORDON & Others, Complainants,
against
WHITELY, FASSLER AND KELLY, Defendants. } In Chancery. # 3696.

Be it remembered that heretofore, to wit, on the seventh day of November, in the year of our Lord one thousand eight hundred and eighty-four, came the complainants, by their solicitors, Stem & Peck, and filed in the clerk's office of said court their certain bill in chancery, said bill being clothed in the words and figures following, to wit:

2 United States Circuit Court, District of ——. In Equity.

To the judges of the circuit court of the United States for the southern district of Ohio:

James F. Gordon and John H. Gordon, of Rochester, N. Y., and David M. Osborne, of Auburn, N. Y., each of whom is a citizen of the State of New York, bring this their bill against Whitely, Fassler and Kelly, of Springfield, Ohio, a corporation organized and existing under and by virtue of the laws of the State of Ohio, and having its principal place of business at Springfield, Ohio.

3 And thereupon your orators complain and say that prior to the 12th day of May, 1868, your orator, the said James F. Gordon, became and was the first and original inventor of certain new and useful improvements in grain-binders not known or used before his invention thereof and which were not at the time of his application for a patent therefor in public use or on sale with his consent and allowance; and your orators further show unto your honors that the said James F. Gordon, so being the inventor of the said improvements in grain-binders, made application to the proper department of the Government of the United States for letters patent, in accordance with the then existing acts of Congress, and duly complied in all respects with all the conditions and requirements of said acts of Congress, and that on the said 12th day of May, 1868, letters patent of the United States, numbered 77878, signed, sealed,

and executed in due form of law, for the said invention or discovery were issued to the said James F. Gordon, whereby there was secured to him, his heirs, executors, administrators, and assigns, for the term of seventeen years from the said 12th day of May, 1868, the full and exclusive right of making, using, and vending the said improvement in grain-binders therein specified and claimed throughout the United States and the territories thereof, as in and by said letters patent or a certified copy thereof, in court to be produced, will more fully and at large appear.

And you rorators further show unto your honors that prior to the sixteenth day of June, 1874, your orator, the said James F. Gordon, became and was the first original inventor of certain
4 other new and useful "improvements in grain-binders" not known or used before his invention thereof and which were not at the time of his application for a patent therefor in public use or on sale with his consent or allowance; and your orators further show unto your honors that the said James F. Gordon, so being the inventor of the said last-mentioned improvements in grain-binders, made application to the proper department of the Government of the United States for letters patent in accordance with the then existing acts of Congress, and duly complied in all respects with all the conditions and requirements of said acts of Congress, and that on the said sixteenth day of June, 1874, letters patent of the United States, numbered 151967, signed, sealed, and executed in due form of law, for the said last above-mentioned invention or discovery were issued to the said James F. Gordon, whereby there was secured to him, his heirs, executors, administrators, and assigns, for the term of seventeen years from the said sixteenth day of June, 1874, the full and exclusive right of making, using, and vending the said improvements in grain-binders therein specified and claimed throughout the United States and the territories thereof, as in and by the said letters patent or a certified copy thereof, in court to be produced, will more fully and at large appear.

And your orators further show unto your honors that prior to the twenty-sixth day of October, 1875, your orator, the said James F. Gordon, became and was the first and original inventor of certain other new and useful improvements in grain-binders not known or used before his invention thereof and which were not at the
5 time of his application for a patent therefor in public use or on sale with his consent or allowance; and your orators further show unto your honors that the said James F. Gordon, so being the inventor of the said last-mentioned improvements in grain-binders, made application to the proper department of the Government of the United States for letters patent in accordance with the then existing acts of Congress and duly complied in all respects with all the conditions and requirements of said acts of Congress, and that on the said twenty-sixth day of October, 1875, letters patent of the United States, numbered 169,258, signed, sealed, and executed in due form of law, for the said last above-mentioned invention or discovery were issued to the said James F. Gordon, whereby there was secured to him, his heirs, executors, admin-

istrators, or assigns, for the term of seventeen years from the said twenty-sixth day of October, 1875, the full and exclusive right of making, using, and vending the said improvements in grain-binders therein specified and claimed throughout the United States and the territories thereof, as in and by said letters patent or a certified copy thereof, in court to be produced, will more fully and at large appear.

6 And your orators further show unto your honors that prior to the commencement of this suit, for valuable consideration, certain assignments of certain interests or rights in and to the said letters patent and each of the same were duly made, executed, and recorded in the Patent Office of the United States, whereby, prior to the infringement hereinafter complained of, the entire right, title, and interest in and to the said inventions or discoveries secured by the said letters patent Nos. 77878, 151,967, and 169,258 and each of the same for the entire territory of the United States, except the State of Michigan, was conveyed to and became vested in your orators, who are now the sole owners of the said letters patent and each of the same for the said southern district of Ohio and in and for the entire territory of the United States, excepting only the State of Michigan, and of all rights of action or recovery for profits or damages arising from infringement of the said letters patent or either of the same, as in and by said assignments or certified copies thereof, here in court to be produced, will more fully appear.

And your orators further show unto your honors that the said improvements in grain-binders are of very great utility, and that they have been extensively applied by your orators to practical use, and that the public have generally acquiesced in your orators' exclusive right to the same, and that your orators have been and but for the infringement hereinafter complained of would still be in the undisturbed use, possession, and enjoyment of the exclusive privileges secured by the said letters patent and each of the same and in receipt of the profits therefrom.

7 And your orators further show unto your honors on information and belief that since the date of the said assignments and up to the time of the commencement of this action the said defendant, well knowing all the facts hereinbefore set forth and against the will of your orators and in violation of your orators' exclusive rights, unlawfully, wrongfully, and injuriously and with intent to deprive profits from making and selling said machines and to deprive your orators of the royalties which they might and otherwise would have derived from the said exclusive rights, at Springfield, in said southern district of Ohio, and elsewhere in the United States, did make, use, and sell and did cause to be made, used, and sold grain-binding machines containing and embodying the said inventions or improvements or substantial and material parts thereof described and claimed in the said several letters patent and each of the same, whereby the said defendant has jointly infringed and is now infringing the said letters patent and each of the same, but how many — said machines the defendant so made, used, or sold

or caused to be made used or sold your orators are ignorant and cannot set forth and pray discovery thereof; but your orators aver on information and belief that the said defendant has made and sold or caused to be made and sold a large number thereof, and that it has derived and *are* now deriving large profits therefrom, but to what amount your orators are ignorant and cannot set forth, but your orators believe the amount to be about the full sum of one hundred and fifty thousand dollars and so charge the fact to be, and that your orators have been deprived of large royalties by reason of the aforesaid infringement of the said defendants and have thus incurred large damages thereby.

8 And your orators further show unto your honors that the said improvements described and claimed in the said several letters patent, Nos. 77878, 151,967, and 169,258, are so nearly allied in character as to be capable of conjoint as well as separate use in grain-binding machines, and that the said inventions, or substantial and material parts of the said inventions, described and secured in and by each of the said several letters patent have been and are in fact used conjointly by the said defendant in the grain-binders manufactured and sold by *them*, and the said defendant has been and now is making, using, and vending in said southern district of Ohio and elsewhere in the United States large numbers of grain-binders, each of which contains, in one and the same machine, the inventions and improvements, or substantial and material parts thereof, described and secured in and by each of the said several letters patent.

And your orators further show that they fear and have reason to fear that unless the said defendant is restrained by a writ of injunction issuing out of this court it will continue to make and sell the said grain-binding machines in infringement of the said letters patent and each of the same and in violation of your orators' exclusive rights thereunder, and that it will thereby cause irreparable injury to your orators' aforesaid exclusive rights.

And your orators further show unto your honors that the said defendant has had notice of the said infringement and has been

9 requested to refrain and desist therefrom, but has refused so to do, and still continues to make, use, and vend grain-binding machines each containing the inventions and improvements secured by said several letters patent.

Forasmuch as your orators can have no adequate relief, except in this court, and as such proceedings are contrary to equity, to the end, therefore, that the defendant may show, if it can, why your orators should not have the relief hereby prayed, and may upon corporal oaths of its pres't or other proper officer, to the best and utmost of their knowledge, remembrance, information, and belief, full, true, direct, and perfect answer make to all and singular the premises and the matters and things hereinbefore stated and charged as fully and particularly as if severally and separately interrogated as to each and every of said matters and as if the same were hereinafter repeated.

And your orators therefore pray that the said defendant may be compelled by a decree of this court to account for and pay over to your orators all such gains and profits as have accrued or arisen to or been earned or received by said defendant from the unlawful use of the said inventions described in and secured by said several letters patent and from infringement thereof, as aforesaid, and, in addition, to pay the damages sustained by your orators from such infringement.

10 And your orators further pray that the said defendant and its officers, servants, agents, attorneys, and workmen, and each and every of them, may be perpetually enjoined and restrained by an injunction issuing out of and under the seal of this honorable court from directly or indirectly making, using, or vending the said improvements or inventions described and claimed in said three several letters patent, No. 77878, No. 151,067, and No. 169,258, or in either of them or any part thereof, or any grain-binding machines made in accordance therewith; that each of said several letters patent may be decreed to be valid and your orators to be the lawful owners of the same and each of them, and that the manufacture, use, and sale of said grain-binding machines by the said defendant is an infringement thereof, and that the said defendant may be decreed to pay the costs of this suit, and that your orators may have such other and further relief as to this honorable court shall seem meet and as shall be agreeable to equity.

And your orators further pray that a preliminary or provisional injunction may be issued out of and under the seal of this honorable court enjoining and restraining the said defendant, its officers, servants, attorneys, agents, and workmen, and each and every of them, from further infringement of said letters patent or either of them during the pendency of this suit.

May it please your honors to grant unto your orators not only writs of injunction conformable to the prayers of this bill, but

11 also the writ of *subpœna ad respondendum*, issuing out of and under the seal of this honorable court, directed to the said defendant, Whitely, Fassler & Kelly, commanding it, at a certain time therein to be named and under a certain penalty therein to be limited, to be and appear before this honorable court, then and there to answer unto this bill of complaint and to perform and abide by such order and decree in the premises as to this honorable court shall seem meet and may be required by the principles of equity and good conscience.

And your orators will ever pray, etc.

JAMES F. GORDON.
JOHN H. GORDON.
DAVIS M. OSBORNE.

GEO. B. SELDEN,
Complainants' Counsel.

12 UNITED STATES OF AMERICA, }
Southern District of New York, } *ss:*

James F. Gordon, being duly sworn, deposes and says that he is one of the complainants in the foregoing bill named; that he has read the foregoing bill of complaint and knows the contents thereof, and that the same is true of his own knowledge, except as to the matters therein stated on information and belief, and as to those matters he verily believes it to be true; and he further says that he verily believes the said James F. Gordon in said bill named to be the original, true, and first inventor of the improvements in grain-binders described and claimed in the said letters patent Nos. 77878, 151,967, and 169,258, and each of the same, mentioned in said bill of complaint, and, further, that he verily believes that the said complainants above named are the lawful owners of each of the said letters patent.

JAMES F. GORDON.

Subscribed and sworn to before me this 1st day of November, 1884.
[SEAL.] Z. L. DAVIS,
Notary Public.

13 And afterwards, to wit, on the same day, to wit, there was issued out of the clerk's office of said court our certain subpœna in chancery, directed to the marshal of the district and against the said defendants herein; said subpœna is clothed in the words and figures following, to wit:

Subpœna in Chancery.

THE UNITED STATES OF AMERICA, }
Southern District of Ohio, } *ss:*

The President of the United States of America to the marshal of the southern district of Ohio, Greeting:

You are hereby commanded to summon Whitely, Fassler and Kelly, of Springfield, Ohio, citizens of and resident of the State of Ohio, if *it* be found in your district, to be and appear in the circuit court of the United States for the southern district of Ohio aforesaid, at Cincinnati, on the first Monday in January next, to answer a certain bill in chancery filed and exhibited in said court against — by James F. Gordon, John H. Gordon, and David M. Osborne, citizens of and resident in the State of New York.

Hereof you are not to fail, under the penalty of the law thence ensuing.

And have you then and there this writ.

Witness the Hon. Morrison R. Waite, Chief Justice of the United States, this 7th day of November, A. D. 1884, and in the 109th year of the Independence of the United States of America.

Attest:
[SEAL.] WM. C. HOWARD, *Clerk.*

14 *Memorandum.*

The said defendant is required to enter its appearance in this suit in the clerk's office of said court on or before the first Monday of December, 1884; otherwise the said bill may be taken *pro confesso.*

WM. C. HOWARD, *Clerk.*

Endorsed thereon: $25.00 deposited, security for all costs for which the plaintiff may be liable in this suit.

And afterwards, to wit, on the 12th day of November, A. D. 1884, came the marshal to whom the said subpœna was in form directed and filed in the clerk's office of said court the same, with his proceedings had thereon endorsed, to wit:

Marshal's Return.

Received this writ at Cincinnati, Ohio, on Nov. 7, 1884, and served in Springfield, O., on Nov. 8, 1884, by handing to and leaving with each, Wm. N. Whitely, pres't, and Oliver S. Kelly, sect'y, of within-named Whitely, Fassler & Kelly, a true copy of this writ.

LOT WRIGHT,
U. S. M., S. D. O.,
By R. F. HAYWOOD, *Deputy.*

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And afterwards, to wit, on the 24th day of Nov., A. D. 1884, the following appearance was filed in the clerk's office of said court, clothed in the words and figures following, to wit;

Appearance.

JAS. F. GORDON *et al.*
vs.
WHITELY, FASSLER & KELLY. } No. 3696.

SPRINGFIELD, O., *Nov.* 22, 1884.

Wm. C. Howard, Esq., cl'k, &c., U. S. courts, Cincinnati.

DEAR SIR: Please enter our appearance for the def'ts in the above-entitled cause and send us copy of the bill.

Yours truly, BOWMAN & BOWMAN.

15 And afterwards, to wit, on the 5th day of January, A. D. 1885, the following answer was filed in the clerk's office of said court, clothed in the words and figures following, to wit:

Answer.

In the Circuit Court of the United States for the Southern District of Ohio.

JAMES F. GORDON, JOHN H. GORDON, and DAVID M. OSBORNE
vs.
WHITELY, FASSLER, AND KELLY. } In Equity.

The answer of Whitely, Fassler and Kelly, the defendant, to the bill of complaint of James F. Gordon, John H. Gordon, and David M. Osborne, compl'ts, exhibited against this defendant in said court.

This defendant, now and at all times hereafter saving and reserving to itself all and all manner of benefit or advantage of exception or otherwise that can or may be had or taken to the many errors, uncertainties, and imperfections in said bill contained, for answer hereto or to so much hereof as this *this* defendant is advised it is material or necessary for it to make answer hereto, answering, says—

That it admits that letters patent of the United States for an alleged improvement in grain-binders, dated the 12th day of
16 May, 1868, and No. 77878, were issued to the complainant James F. Gordon, but whether said letters patent were signed, sealed, or executed in due form of law, or whether due application was made -herefor, or whether the said James F. Gordon made application therefor in accordance with the then existing acts of Congress or duly complied in all respects with all the conditions and requirements of the said acts of Congress, as set forth in said bill, this defendant does not know and is not informed, save by said bill, and leaves the complainants to make such proof thereof as they may be advised.

This defendant, further answering, upon information and belief denies that the said complainant, James F. Gordon, was the first and original inventor of said alleged improvements in grain-binders, or that the said improvements were not known or used by others before the alleged invention or discovery thereof by the said complainant, or that the said letters patent secured to the said complainant, James F. Gordon, his heirs, executors, administrators, or assigns, the full, exclusive right of making, using, and vending the said alleged improvements in grain-binders or any part thereof for the term of 17 years in said bill averred or for any time whatsoever.

That it admits that letters patent of the United States for an alleged improvement in grain-binders, dated June 16th, 1874, and No. 151,967, were issued to the complainant James F. Gordon, but whether said letters patent were signed, sealed, or executed in due form of law, or whether due application was made therefor, or whether the said James F. Gordon made application therefor in ac-

cordance with the then existing acts of Congress, or duly complied in all respects with all the conditions and requirements of the said acts of Congress, as set forth in said bill, this defendant
17 does not know and is not informed, save by said bill, and leaves the complainants to make such proof thereof as they may be advised.

This defendant, further answering, upon information and belief denies that the said complainant James F. Gordon, was the first and original inventor of said alleged improvements in grain-binders, or that the said improvements were not known or used by others before the alleged invention or discovery thereof by the said complainant, or that the said letters patent secured to said complainant, James F. Gordon, his heirs, executors, administrators, or assigns, the full and exclusive right of making, using, and vending the said improvements in grain-binders or any part thereof for the term of 17 years in said bill averred or for any time whatsoever.

That it admits that letters patent of the United States for an alleged improvement in grain-binders, dated October 26th, 1875, and No. 169,258, were issued to the complainants James F. Gordon, but whether said letters patent were signed, sealed, or executed in due form of law, or whether due application was made therefor, or whether the said James F. Gordon made application therefor in accordance with the then existing acts of Congress or duly complied in all respects with all the conditions and requirements of said acts of Congress, as set forth in said bill, this defendant does not know and is not informed, save by said bill, and leaves the complainants to make such proof thereof as they may be advised.

This defendant, further answering, upon information and belief denies that the said complainant, James F. Gordon, was the first and original inventor of said alleged improvements in grain-bind-
18 ers, or that the said improvements were not known or used by others before the alleged invention or discovery thereof by the said complainant, or that the said letters patent secured to the complainant James F. Gordon, his heirs, executors, administrators, or assigns, the full and exclusive right of making, using, and vending the said improvements in grain-binders or any part thereof for the term of 17 years in said bill averred or for any time whatsoever.

And this defendant, further answering, says that it does not know and is not informed, save by said bill, and cannot set forth, as to its belief or otherwise, whether or not any assignment of any interest in the aforesaid letters patent was ever made or was ever recorded in the Patent Office of the United States, or whether or not the complainants thereby acquired any interest in the said letters — or in any of them, or in any or all rights of action for profits or damages arising from infringement of said letters patent or of any of them, or whether or not the complainants are the sole owners of the said letters patent or any of them, and leaves the complainants to make such proof thereof as they may be advised.

And this defendant, further answering, denies that the said alleged improvements described and claimed in the said several let-

ters patent Nos. 77878, 151,967, and 169,258 are so nearly allied in character as to be capable of conjoint as well as of separate use in grain-binding machines, or that the said inventions or substantial and material parts of the said inventions described in and secured by each of the several letters patent have been or in fact are used conjointly by this defendant in the grain-binders manu-
19 factured and sold by it, or that this defendant has been or now is making, using, or vending in said southern district of Ohio or elsewhere any grain-binders which contains in one and the same machine the alleged inventions or improvements or substantial and material parts thereof described and secured in and by each of the said several letters patent.

On the contrary, this defendant says upon information and belief that it does not require all of the alleged inventions described in and by each of said letters patent to constitute a complete grain-binding machine, and that the said alleged inventions described and claimed in and by each of said letters patent cannot be used upon one and the same machine, and the complainants are not entitled to unite claims for infringement of each of said letters patent in the same suit against this defendant, and this defendant prays the same advantage of this objection as if it had pleaded the same to the complainants' said bill of complaint.

And this defendant, further answering, denies that the said alleged improvements in grain-binders are of very great utility, or that they have been extensively applied by the complainants to practical use, or that the public have *acquired* in the complainants' exclusive right to the same, or that the said alleged inventions are of any use or value to the complainants or to the public, but, upon the contrary, this defendant upon information and belief says that the said alleged improvements in grain-binders never were perfected or adopted to use by the complainants, but were abandoned by them, and were not reduced by them to working capability or practical use.

And this defendant, further answering, denies that it has
20 made, sold, or used or is making, selling, or using any grain-binding machine containing or embodying any of the alleged inventions or improvements or any substantial and material part thereof which are described and claimed in and by the aforesaid mentioned letters patent set forth in said bill or in and by any of them.

And this defendant, further answering, upon information and belief denies that the complainant James F. Gordon was the original or first inventor of said alleged improvements in grain-binding machines described and claimed by said several letters patent or in and by any of them in said bill mentioned or of any material or substantial part of said alleged improvements in grain-binding machines or any of them.

But, on the contrary, this defendant upon information and belief avers and will maintain that long prior to the alleged or to any invention of said improvements in grain-binding by the said complainant, James F. Gordon, the same had been patented and described

in letters patent of the United States granted to the following persons on the dates following respectively and bearing the date upon which they were respectively granted, viz:

No. 8083 to Watson, Renwick & Watson, dated May 13, 1851.
No. 9930 to Watson & Renwick, dated Dec. 6, 1853.
No. 50815 to A. Goodyear, dated Nov. 7, 1855.
No. 21540 to Allen Sherwood, dated Sept. 14, 1858.
No. 31402 to Stephen S. Reynolds, dated Feb. 12, 1861.
No. 37408 to Theodore Palmer, dated Jan'y 13, 1863.
No. 56380 to S. D. Locke, dated July 24, 1866.
No. 75215 to A. S. Stone, dated March 3, 1868.
21 No. 84693 to Hayes, Wald & Main, dated Dec. 8, 1868.
No. 88087 to G. B. Shafer, dated March 3d, 1869.
No. 97531 to S. D. Locke, dated Dec. 7, 1869.
No. 103,861 to T. Fowler, dated June 7, 1870.
No. 110,138 to A. S. Hoyt, dated Dec. 13, 1870.
No. 124,020 to Wm. Siverd, Jr., dated Feb. 27, 1872.
No. 149,233 to S. D. Locke, dated March 31, 1874.
No. 150,992 to C. B. Withington, dated May 19, 1874.
No. 151,105 to H. A. Dietzel, dated May 19, 1874.
No. 159,506 to M. L. Gorham, dated Feb. 9, 1875.

21½ And the defendant, further answering, upon information and belief says that the combination of the grain-binding machine made and sold by this defendant and the organization and adoption of the several parts thereof to the work of binding grain employed in the machine made and sold by this defendant has been the subject of several letters patent of the United States, under and by virtue of the authority of which this defendant has been and is engaged in making all the grain-binding machines made and sold by it as follows, viz:

No. 90807 to J. F. Appleby, dated June 1, 1869.
No. 93165 to J. Bebee, dated Aug. 3, 1869.
No. 110,498 to F. W. Randall, dated Dec. 27, 1870.
No. 120,828 to M. F. Ridout, dated Nov. 14, 1871.
No. 140,083 to L. A. Scott, dated June 17, 1873.
No. 141,507 to A. S. Hoyt, dated Aug. 5, 1873.
No. 155,528 to W. Lentz & R. Witke, dated Sept. 29, 1874.
No. 159,506 to M. L. Gorham, dated Feb. 9, 1875.
No. 169,743 to A. W. Tucher, dated Nov. 9, 1875.
No. 171,465 to J. F. Appleby, dated Dec. 28, 1875.
No. 171,652 to C. G. Crosse, dated January 4, 1876.
No. 176,550 to J. R. Prescott, dated April 25, 1876.
No. 179,050 to Randall & Rayment, dated June 20, 1876.
No. 188,032 to L. A. Scoville, dated March 6, 1877.
No. 188,125 to Geo. F. Greene, dated March 6, 1877.
No. 191,776 to W. H. Payne, dated June 12, 1877.
No. 208,137 to J. F. Appleby, dated Sept. 17, 1878.
22 No. 212,420 to J. A. Appleby, dated Feb. 18, 1878.
No. 213,838 to F. W. Randall, dated April 1, 1879.

No. 214,790 to W. H. Payne, dated April 29, 1879.
No. 219,304 to " " dated Sept. 2, 1879.
No. 233,089 to M. L. Gorham, dated Oct. 12, 1880.
No. 231,448 to F. W. Randall, dated Aug. 24, 1880.
No. 234,372 to W. H. Payne, dated Nov. 9, 1880.
No. 241,457 to C. L. Travis, dated May 10, 1881.
No. 252,988 to J. F. Appleby, dated Jan'y 31, 1882.
No. 255,569 to Wm. Bayley, dated May 28, 1882.
No. 255,741 to Whitely, Baylee & Hurd, dated May 28, 1882.
No. 255,941 to J. H. Dean, dated April 4, 1882.
No. 256,188 to J. F. Appleby, dated April 11, 1882.
No. 257,837 to J. F. Appleby, dated May 16, 1882.
No. 258,180 to Wm. N. Whiteley, dated May 16, 1882.
No. 260,087 to J. H. Dean, dated June 27, 1882.
No. 260,634 to J. F. Appleby, dated July 4, 1882.
No. 261,072 to J. F. Apply*by*, dated July 4, 1882.
23 No. 262,883 to J. F. Appleyby, dated Aug. 15, 1882.
No. 264,602 " " " Sept. 19, "
No. 265,199 to Whitely & Thomas, Sept. 26, "
No. 265,215 to Wm. Bayley, " " "
No. 266,087 to R. Brown, Oct. 17, "
No. 266,426 to " Oct. 24, "
No. 266,937 to Whitel*u* & Bayley, Oct. 31, "
No. 255,949 to Bullock & Appleby, " "
No. 267,934 to T. M. Rice, Nov. 21, "
No. 267,935 to " " "
No. 267,936 to " " "
No. 273,811 to W. W. Burson, March 13, 1883.
No. 273,812 to W. W. Burson, dated March 13, 1883.
No. 274,077 to Whitely, Bayley & Lee, dated M'ch 13, 1883.
No. 274,870 to Whitely & Bayley, " M'ch 27, "
No. 275,114 to J. F. Appleby, " April 3, "
No. 276,519 to " " April 24, "
No. 283,445 to Whitely, Bayley & Lee, " Aug. 21, "
No. 290,658 to J. F. Appleby, " Dec. 25, 1884.
No. 305,038 to " " April 22, "
No. 305,038 to " " Sept. 16, "
No. 305,039 to " " Sept. 16, "
No. 306,448 to Whiteley & Bayley, " Oct. 14, "

And the defendant, further answering, says that if the complainants' patent is entitled to receive a construction which would
24 include the grain-binding apparatus upon the machines sold by this defendant, then the said patents, as this defendant is informed and believes, are null and void.

And this defendant, further answering, says that it is not now making, using, or selling, nor has it at any time ever made or sold any grain-binding machine containing or employing any of the improvements claimed in the complainants' patents.

And this defendant, further answering, denies that said complainant- *is* entitled to the relief or any part thereof in *his* said bill.

of complaint demanded, and says there is no equity in said bill, and that the matters hereof are properly cognizable in a court of equity; and this defendant prays the same advantage for this answer as if he had pleaded or demurred to said bill of complaint;

Without this, that there is any other matter, c-use, or thing in said complainants' said bill of complaint contained material or or necessary for this defendant to make answer unto and not herein and hereby well and sufficiently answered, confessed, traversed, and avoided or denied is true to the knowledge or belief of this defendant; all which matters and things this defendant is ready and willing to aver, maintain, and prove as this honorable court shall direct, and prays to be hence dismissed with his reasonable costs and charges in this behalf most wrongfully sustained.

WHITELY, FASSLER & KELLY,
By WILLIAM N. WHITELY, *Pres't.*

BOWMAN & BOWMAN, *Sol'rs for Def'ts.*
S. A. BOWMAN, *Of Counsel.*

25 THE UNITED STATES OF AMERICA, }
Southern District of Ohio. }

William N. Whitely, being duly sworn, says that he is the president of the defendant named in the foregoing answer; that he has read the same and knows the contents thereof, and that the same is true of his own knowledge except as to matters herein stated in information and belief, and as to those matters he verily believes it to be true.

FRANK B. FURNISS,
[SEAL.] *Notary Public, Clark Co., O.*

And afterwards, to wit, on the 17th day of Feb., A. D. 1885, the following replication was filed in the clerk's office of said court, clothed in the words and figures following, to wit:

Replication.

Circuit Court of the U. S. for the Southern Dist. of Ohio, W. D.

JAMES F. GORDON, JOHN H. GORDON, and DAVID M. OSBORNE
vs.
WHITELY, FASSLER & KELLY. } No. —. In Equity.

26 The replication of the above-named complainants to the answer of the above-named defendants.

These repliants, saving and reserving to themselves now and at all times hereafter all and all manner of benefit of advantage of exception which may be had or taken to the manifold insuffi-encies of said answer, for replication thereunto say that they will aver, main-

tain, and prove their bill of complaint to be true, certain, and sufficient in law to be answered unto, and that the said answer of the said defendant is uncertain, untrue, and insufficient to be replied unto by these repliants; without this, that any other matter or thing whatsoever in the said answer contained material or effectual in the law to be replied unto and not herein and hereby well and sufficiently replied unto, confessed and avoided, traversed or denied, is true; all which matters and things these repliants are and will be ready to aver, maintain, and prove as this honorable court shall direct, and humbly pray as in and by their said bill they have already prayed.

STEM & PECK,
Solicitors for Complainants.

And afterwards, to wit, on the 13th day of December, A. D. 1886, the following bill of revivor was filed in the clerk's office of said court, clothed in the words and figures following, to wit:

Bill of Revivor.

27 United States Circuit Court, Southern District of Ohio.

JAMES F. GORDON, JOHN H. GORDON, and DAVID M. OSBORNE
against
WHITELY, FASSLER & KELLY. } In Equity.

To the honorable the judges of the United States circuit court for the southern district of Ohio, in chancery sitting:

John H. Gordon, of Rochester, in the State of New York, and a citizen of the State of New York; Mary A. Gordon, of Rochester, in the State of New York, and a citizen of the State of New York; Eliza W. Osborne, in the State of N. Y., & a citizen of said State of N. Y.; Frederick Harris, of Springfield, in the State of Massachusetts, and a citizen of the State of Massachusetts, and Thomas M. Osborne, of Auburn, in the State of New York, and a citizen of the State of New York, bring this their bill of revivor against Whitely, Fassler & Kelly, a corporation organized under and by the laws of the State of Ohio and doing business at Springfield, in the
28 State of Ohio; and thereupon your orators complain and say that heretofore said John H. Gordon and James F. Gordon, late of Rochester, in the State of New York, and a citizen of the State of New York, but now deceased, and David M. Osborne, late of Auburn, in the State of New York, and a citizen of said State, but now deceased, on or about the 7th day of November, 1884, exhibited their said bill of complaint in this honorable court against the defendants as defendants thereto, alleging that said defendants had infringed certain letters patent of the United States lawfully owned by the said complainants and had made and secured large gains and profits thereby which of right belonged to said complainants, and had also inflicted great damage upon the complainants,

which complainants ought of right to have and recover from said defendants, and praying for the issuance of process upon said bill, and that defendants answer the allegations thereof; that the defendants be decreed to account for and pay over all such profits and pay all such damages and be perpetually restrained by the decree and injunction of this court from infringing said letters patent, as by said bill, reference being thereto had, will more fully and at large appear.

And the complainants further show unto your honors that said defendants, having been duly served with process in said cause, appeared and put in their answer to said bill, to which the said complainants put their replication; and, said cause being thus at issue upon bill and answer, depositions having been taken by both parties in said cause, that the taking of the testimony is not wholly completed therein and no final hearing in said cause has been had; that afterwards said David M. Osborne died, leaving a last will and testament, which, upon due proceedings therefor had, was duly proved and admitted to probate in the surrogate's court of Cayuga county, in the State of New York, on the 16th day of July, 1886,
and therein and thereby letters testamentary, with said will
29 annexed, as provided by said will, duly issued to said Eliza W. Osborne, Frederick Harris, and Thomas M. Osborne, who duly qualified as executors of said David M. Osborne and thereby became and are duly qualified legal representatives of said David M. Osborne; that said suit and proceedings having become abated by the death of said David M. Osborne, your orators, said executors, are, as they are advised, entitled, as the personal representatives of said David M. Osborne, to have the said suit and proceedings revived against the said defendants and to have the said cause in the same state and condition as the same was previously to the death of said David M. Osborne.

That after the taking of said depositions said James F. Gordon departed this life, leaving a last will and testament appointing Mary A. Gordon his executrix, which will was, on the proceedings therefor duly had, duly proved and admitted to probate on the 16th day of September, 1886, in the surrogate's court for Monroe county, in the State of New York, and letters testamentary, with the will annexed, thereupon issued to said Mary A. Gordon, who duly qualified as such executrix and thereby became and now is the legal representative of said James F. Gordon.

That said suit and proceedings have become abated by the death of James F Gordon.

And your orators further show unto your honors that the said Eliza W. Osborne, Frederick Harris, and Thomas M. Osborne are, as the legal representatives of said David M. Osborne, fully entitled to have and recover all that said David M. Osborne was entitled to have and recover by said bill in his lifetime, and said Mary A. Gordon, as the legal representative, is entitled to recover all that said James F. Gordon was entitled to recover during his lifetime by said bill.

Forasmuch, therefore, as your orators are without remedy except in a court of equity, and to the end that said defendants who are made parties to this bill may be required to make full, true,
30 and direct answer to the same, but not under oath, the answer under oath being hereby waived, that the said suit may stand revived and be in the same plight and condition as the same was at the deaths of said David M. Osborne and said James F. Gordon, and that your orators may have such further and other relief in the premises as equity may require and to your honors shall seem meet—

May it please your honors to grant unto the complainants a writ of subpœna to revive, issuing out of and under the seal of this honorable court, to be directed to said Whitely, Fassler & Kelly, hereby commanding them, at a certain day and under a certain penalty to be therein inserted, personally to be and appear before your honors, in this honorable court, then and there to answer and show cause, if any they can, why the said suit and the proceedings therein had should not stand and be revived against them and be in the same plight and condition as the same were in at the time of the abatement thereof, and, further, to stand to and abide — such order and decree in the premises as to your honors shall seem meet; and your orators will ever pray, etc.

JOHN H. GORDON.
MARY A. GORDON.
ELIZA W. OSBORN.
FREDERICK HARRIS.
THOS. M. OSBORNE.

STEM & PECK,
Complainants' Solicitors.
ESEK COWEN,
Of Counsel.

UNITED STATES OF AMERICA, }
Northern District of New York, } *ss:*

Thomas M. Osborne, being duly sworn, says that he is one of the complainants named in the foregoing bill of revivor and makes this verification in behalf of himself and his co-complainants;
31 that he has read the said bill and knows the contents thereof, and that the same is true of his own knowledge except as to matters therein stated upon information and belief, and as to those matters he believes it to be true.

THOMAS M. OSBORNE.

Subscribed and sworn to before me this 16th day of November, 1886.

[SEAL] J. FRANK DAVIS,
Notary Public, Cayuga Co., N. Y.

32 And afterwards, to wit, on the 23rd day of Dec., A. D. 1886, an entry was made upon the journal of said court, clothed in the words & figures following, to wit:

Journal W, p. 580.

In Equity.

Upon reading and filing the bill of revivor, filed in the cause of James F. Gordon, John H. Gordon, and David M. Osborne against the above-named defendants by the above-named complainants, and the subpœna issued thereon, and the same having been duly served, and the solicitors of said defendants consenting thereto by stipulation on file herein, it is, upon consideration—

Ordered that said cause of John H. Gordon, James F. Gordon, and David M. Osborne be revived and stand entitled John H. Gordon, Mary A. Gordon (as executrix of James H. Gordon, deceased), and Eliza W. Osborne, Frederick Harris, and Thomas M. Osborne (as executors of David M. Osborne, deceased) *vs.* the defendants above named, and that Mary A. Gordon shall be held and considered to hold and represent all the interest of said James F. Gordon in the original suit as executrix, and that Eliza W. Osborne, Frederick Harris, and Thomas M. Osborne be held and considered to hold and represent all the interest of the said David M. Osborne in said original suit as executors, and that all the testimony herein heretofore taken or stipulated to be used in said original cause may be read and used in this cause as revived as though taken therein, and all stipulations made in said original cause shall be binding in this cause as though made therein.

33 And afterwards, to wit, on the 15th day of January, A. D. 1889, the following appearance was filed in the clerk's office of said court, clothed in the words and figures following, to wit;

Appearance.

United States Circuit Court, Southern District of Ohio.

JAMES F. GORDON *et al.* *vs.* WHITELY, FASSLER & KELLY. } In Equity. No. 3696.

SAME *vs.* CHAMPION MACHINE CO. } In Equity. No. 3695.

CLERK: Please enter our appearance as solicitors and counsel for defendants in the above-entitled cases, as per agreement herewith filed.

Respectfully, PARKINSON & PARKINSON,
By ROB'T H. PARKINSON.

Cincinnati, O., Jan. 14, 1889.

Gen. B. R. Cowen, clerk C. C., Cincinnati, O.:

Please substitute R. H. Parkinson, Esq., as solicitor for defendant in the case of James Gordon *et al. v.* Whitely, Fassler & Kelly and The Champion Machine Co., pending in your U. S. court, S. D. of Ohio.

Yours truly, S. A. BOWMAN.

34 And afterwards, to wit, on the 9th day of May, A. D. 1889, an entry was made upon the journal of said court, clothed in the words and figures following, to wit:

Journal Y, p. 319.

This cause having been brought on for hearing and argued as well for complainant as for defendant, and having been duly considered by the court, it is ordered, adjudged, and decreed that the defendant's machines complained of do not infringe complainants' patent (being patent No. 77878, granted James F. Gordon May 12, 1888, for improvements in grain-binders), that the equities are with the defendant, and that the bill of complaint be dismissed at complainants' costs; and thereupon complainants prayed an appeal to the Supreme Court of the United States, which appeal is granted and bond fixed at $1,000.

And afterwards, to wit, on the 6th day of July, A. D. 1889, the following petition was filed in the clerk's office of said court, clothed in the words and figures following, to wit:

Petition of Appeal.

Supreme Court of the United States.

JOHN H. GORDON, MARY A. GORDON, as Executrix of James F. Gordon, Deceased; Eliza W. Osborne, Frederick Harris, and Thomas M. Osborne, as Executors of David M. Osborne, Deceased, Appellants,

vs.

WHITELY, FASSLER & KELLY, Appellee.

35 To the honorable the Supreme Court of the United States:

The appeal of John H. Gordon, Mary A. Gordon, as executrix of James F. Gordon, deceased; Eliza W. Osborne, Frederick Harris, and Thomas M. Osborne, as executors of David M. Osborne, deceased, the above-named complainants and appellants, respectfully showeth:

That on or about the 7th day of November, 1884, John H. Gordon, James F. Gordon, now deceased, and David M. Osborne, now deceased, filed their bill in the circuit court of the United States for the southern district of Ohio against the above-named defendant; that said cause was duly revived and entitled as above by order of the court on the 23rd day of December, 1886, said bill alleging that

the defendent did infringe certain letters patent for improvements in grain-binders which were lawfully owned by the said complainants, the said bill showing the issue of said letters patent and the exclusive right and title of the said complainants in and to the same and charging the defendant with infringement thereof by unlawfully and wrongfully making, using, and selling grain-binders containing and embodying the said invention and letters patent of the complainants; the said bill further praying that the defendant be restrained and enjoined from such alleged infringements, and from using and selling such machines, and be compelled to account for and pay the complainants the gains and profits received by it, the defendant, from such alleged infringements, the damages which the complainants sustained; and the said defendant made and filed answer thereto, and the complainants duly filed their replication to said answer, and both parties took proof in said cause, and
36 the said cause was brought on for final hearing before the court in the term of the first Tuesday of April, 1886, upon the pleadings and proofs therein; whereupon the said court on such hearing decided that the defendant's machines complained of did not infringe complainants' patent, being patent #77878, granted James F. Gordon May 12, 1868, for improvements in grain-binders; that the equities were with the defendant, and that the bill of complaint be dismissed at complainants' costs; and a final decree was made and pronounced in the cause on the 9th day of May, 1889, wherein it was in substance adjudged and decreed that the complainants' bill be dismissed, and that the complainants, these appellants, pay the costs.

Therefore these appellants appeal from the said final decree of the said circuit court and respectfully pray that the decree of the said circuit court and the bill, answer, pleadings, depositions, evidence, and proceedings in the said cause may be sent to the Supreme Court of the United States without delay, and that the said Supreme Court may proceed to hear the said cause anew, and that the said decree dismissing complainants' bill with costs may be reversed and a decree made as prayed for in said bill, with such other decree as to the said Supreme Court shall seem just.

Dated Albany, N. Y., June 29th, 1889.

ESEK COWEN,
Of Counsel for Complainants, Appellants.

The foregoing appeal is allowed.
June —, 1889.

GEO. R. SAGE,
District Judge of the U. S., Southern District of Ohio, Sitting and Holding Circuit Court.

37 And afterwards, to wit, on the 6th day of July, A. D. 1889, the following appeal bond was filed in the clerk's office of said court, clothed in the words and figures following, to wit:

Appeal Bond.

Know all men by these presents that I, Alfred M. Allen, of Glendale, Ohio, am held and firmly bound unto Whitely, Fassler & Kelly, of Springfield, Ohio, in the sum of one thousand dollars, to be paid to the said Whitely, Fassler & Kelly or its successors and assigns; for which payment, well and truly to be made, I bind myself, my heirs, executors, and administrators, by these presents.

Sealed with my seal and dated the fifth July, 1889.

Whereas, at a circuit court of the United States within and for the southern district of Ohio, in a suit in equity pending in said court between John H. Gordon, Mary A. Gordon, as executrix of James F. Gordon, deceased; Eliza W. Osborne, Frederick Harris, and Thomas M. Osborn, as executors of David M. Osborne, deceased, complainants, and Whitely, Fassler and Kelly, defendants, a decree was rendered against the complainants, and the said complainants having obtained an appeal to remove the said case to the Supreme Court of the United States to reverse the decree in the aforesaid suit, and a citation directed to the said Whitely, Fassler & Kelly, citing and admonishing them to be and appear at the October term, 1889, of the Supreme Court of the United States, to be held at Washington:

38 Now, therefore, the condition of the above obligation is such that if the said John H. Gordon, Mary A. Gordon, executrix of James F. Gordon, deceased; Eliza W. Osborne, Frederick Harris, and Thomas M. Osborne, as executors of David M. Osborne, deceased, shall prosecute their said appeal to effect and answer all damages and costs if they fail to make their plea good, then the above obligation to be null and void; otherwise to remain in full force and virtue.

ALFRED M. ALLEN. [SEAL.]

In the presence of—
ROB'T C. GEORGI.
GEO. C. WRIGHT.

The above security is approved.

GEO. R. SAGE,
District Judge of the United States, Southern District of Ohio, Sitting and Holding Circuit Court.

SOUTHERN DISTRICT OF OHIO, *ss:*

I, Alfred M. Allen, one of the sureties above named, do solemnly swear that after paying my just debts and liabilities I am worth ten thousand dollars in real estate in my own name situate in the county of ——, in said district.

ALFRED M. ALLEN.

39 Sworn to before me the 6th day of July, 1889.

ROB'T C. GEORGI,
Deputy Clk U. S. Circuit Court, S. D. O. [SEAL.]

And afterwards, to wit, on the 12th day of July, A. D. 1889, an entry was made upon the journal of said court, clothed in the words and figures following, to wit:

Journal Y, p. 384.

Now come the appellants and present herewith the appeal bond of Benedict Frenkel and pray that the same may be substituted as the appeal bond for the bond hereinbefore filed, to wit, on July 6th, 1889, which is accordingly done.

And afterwards, to wit, on the 12th day of July, A. D. 1889, the following appeal bond was filed in the clerk's office of said court, clothed in the words and figures following, to wit:

Appeal Bond.

Know all men by these presents that I, Benedict Frenkel, of Cincinnati, Ohio, am held and firmly bound unto Whitely, Fassler and Kelly, of Springfield, Ohio, in the sum of one thousand dollars, to be paid to the said Whitely, Fassler & Kelly; for which payment, well and truly to be made, I bind myself, my heirs, executors, and administrators, by these presents.

Sealed with my seal and dated the 12th day of July, 1889.

Whereas, at a circuit court of the United States within and for the southern district of Ohio, in a suit in equity pending in said court between John H. Gordon, Mary A. Gordon, as executrix of James F. Gordon, deceased; Eliza W. Osborne, Frederick Harris, and Thomas M. Osborne, as executors of David M. Osborne, deceased, complainants, and Whitely, Fassler & Kelly, defendants, a decree was rendered against the complainants, and the said complainants having obtained an appeal to remove the said case to the Supreme Court of the United States to reverse the decree in the aforesaid suit, and a citation directed to the said Whitely, Fassler & Kelly, citing and admonishing them to be and appear at the October term, 1889, of the Supreme Court of the United States, to be held at Washington:

Now, therefore, the condition of the above obligation is such that if the said John H. Gordon, Mary A. Gordon, executrix of James F. Gordon, deceased; Eliza W. Osborne, Frederick Harris, and Thomas M. Osborne, as executr*ix* of David M. Osborne deceased, shall prosecute their said appeal to effect and answer all damages and costs if they fail to make their plea good, then the above obligation to be null and void; otherwise to remain in full force and virtue.

BENEDICT FRENKEL.

In presence of—
J. B. FRENKEL.
ROB'T C. GEORGI.

41 On the 12th day of July, 1889, before me personally came Benedict Frenkel, to me known and known to me to be the individual described in and who executed the foregoing bond, and he acknowledged that he executed the same.

[SEAL.] ROBT C. GEORGI,
Deputy Clk U. S. Cir. Ct, S. D. O.

SOUTHERN DISTRICT OF OHIO, *ss:*

I, Benedict Frenkel, one of the sureties above named, do solemnly swear that after paying my just debts and liabilities I am worth ten thousand dollars in real estate in my own name situate in the county of Hamilton, in said district.

BENEDICT FRENKEL.

Sworn to before me the 12th day of July, 1889.

ROBT C. GEORGI, [SEAL.]
Deputy Clerk U. S. Circuit Court, S. D. O.

42 And afterwards, to wit, on the 19th day of September, A. D. 1889, the following stipulation was filed in the clerk's office of said court, clothed in the words and figures following, to wit:

Stipulation.

United States Circuit Court, Southern District of Ohio.

JOHN H. GORDON & Others
vs.
BENJAMIN H. WARDER and Others.

SAME
vs.
WHITELY, FASSLER & KELLY.

SAME
vs.
THE CHAMPION MACHINE COMPANY.

SAME
vs.
ABEL HOOVER & Another.

The evidence taken in either of the above-entitled causes having been treated upon the hearing in the circuit court as if taken in all of them, so far as pertinent, and it being the desire of the respective counsel that the same should be so used upon appeal, and that the same depositions and exhibits should not be duplicated in the
43 transcripts carried to the Supreme Court, it is hereby stipulated that the clerk of the circuit court shall, upon an appeal to the Supreme Court of the United States being taken in each of the above-entitled causes, certify to that court the pleadings in each

case, together with such evidence as has been filed therein, and that the evidence taken and filed in the suit wherein Benjamin Warder *et al.* are defendants and the suit wherein Abel Hoover *et al.* are defendants shall, so far as pertinent, be referred to and used upon the hearing in the Supreme Court with the same effect as if taken and filed in all of said causes.

PARKINSON & PARKINSON,
Of Counsel for Defendants.
ARTHUR STEM,
Solicitor for Complainants.

44 THE UNITED STATES OF AMERICA, }
Southern District of Ohio, Western Division, } *ss:*

I, Benjamin R. Cowen, clerk of the circuit court of the United States within and for the district and division aforesaid, do hereby certify that the foregoing is a true and complete transcript of the proceedings had by and before the court aforesaid in the above-entitled cause as the same appears of record and on file in the clerk's office of said court.

In testimony whereof I have hereunto set my hand and affixed the seal of the said court, at Cincinnati, O., this 14th day of October, A. D. 1889.

[Seal of the Circuit Court, South'n Dist. of Ohio.]

B. R. COWEN,
Clerk U. S. Circuit Court, S. D. O.,
By R. C. GEORGI, *Deputy.*

45 By the Hon. George R. Sage, district judge of the United States, S. D. O., sitting and holding circuit court of the United States for the southern district of Ohio, to Whitely, Fassler & Kelly:

Whereas John H. Gordon, Mary A. Gordon, as executrix of James F. Gordon, deceased; Eliza W. Osborne, Frederick Harris, and Thomas M. Osborne, as executors of David M. Osborne, deceased, have lately appealed to the Supreme Court of the United States from a decree lately rendered in the circuit court of the United States for the southern district of Ohio, made in favor of you, the said Whitely, Fassler & Kelly, and have filed the security required by law, you are therefore hereby cited to appear before the said Supreme Court, at the city of Washington, on the second Monday of October, 1889, to do and receive what may appertain to justice to be done in the premises.

Given under my hand, at the city of Cincinnati, in the southern district of Ohio, in the sixth circuit, on the 6th day of July, in the year of our Lord one thousand eight hundred and eighty-nine.

GEO. R. SAGE,
District Judge of the United States, S. D. O., Sitting and Holding Circuit Court, There Being no Associate Justice or Circuit Judge in the District.

46 [Endorsed:] 7, 6, '89. United States circuit c't, southern district of Ohio. In equity. John H. Gordon & o'rs against Whitely, Fassler and Kelly. 3696. Citation on appeal to the Supreme Court of the United States. Esek Cowen, counsel for complainants & appellants, 25 North Pearl street, Albany, N. Y. Filed Jul- 27, 1889. B. R. Cowen.

Received this writ at Cincinnati, Ohio, on the 6th day of July, 1889, and at Springfield, Ohio, on the 16th day of July, 1889, I served the within-named The Whiteley, Fassler & Kelley, a corporation, by handing to Wm. M. Whiteley, president, and W. T. Stilwell, secretary, respectively, of said corporation, each personally a true copy of this writ, having all the endorsements thereon.

J. H. SIMMONS, *U. S. Marshal*,
By CHAS. A. COSTELLO, *Deputy*.

2 services	4 00
2 copies	1 00
	$5 00

Endorsed on cover: Case No. 13,856. S. Ohio C. C. U. S. No. 246. John H. Gordon, Mary A. Gordon, executrix of James F. Gordon, deceased, and Eliza W. Osborne, Frederick Harris, and Thomas M. Osborne, executors of David M. Osborne, deceased, appellants, *vs.* Whiteley, Fassler & Kelly. Filed October 21, 1889.

Office Supreme Court U. S.
FILED.
OCT 9 1893
JAMES H. McKENNEY,
CLERK

Supreme Court of the United States.

JOHN H. GORDON AND OTHERS,
Appellants,
agst.
BENJAMIN H. WARDER AND OTHERS,
Appellees.

SAME,
Appellants,
agst.
ABEL HOOVER AND WILLIAM GAMBLE,
Appellees.

SAME,
Appellants,
agst.
CHAMPION MACHINE COMPANY,
Appellee.

SAME,
Appellants,
agst.
WHITLEY, FASSLER & KELLY,
Appellee.

ARGUMENT OF ESEK COWEN, FOR THE APPELLANTS.

The Evening Post Job Printing House, New York.

46 [Endorsed:] 7, 6, '89. United States circuit c't, southern district of Ohio. In equity. John H. Gordon & o'rs against Whitely, Fassler and Kelly. 3696. Citation on appeal to the Supreme Court of the United States. Esek Cowen, counsel for complainants & appellants, 25 North Pearl street, Albany, N. Y. Filed Jul- 27, 1889. B. R. Cowen.

Received this writ at Cincinnati, Ohio, on the 6th day of July, 1889, and at Springfield, Ohio, on the 16th day of July, 1889, I served the within-named The Whiteley, Fassler & Kelley, a corporation, by handing to Wm. M. Whiteley, president, and W. T. Stilwell, secretary, respectively, of said corporation, each personally a true copy of this writ, having all the endorsements thereon.

J. H. SIMMONS, *U. S. Marshal*,
By CHAS. A. COSTELLO, *Deputy*.

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Endorsed on cover: Case No. 13,856. S. Ohio C. C. U. S. No. 246. John H. Gordon, Mary A. Gordon, executrix of James F. Gordon, deceased, and Eliza W. Osborne, Frederick Harris, and Thomas M. Osborne, executors of David M. Osborne, deceased, appellants, *vs.* Whiteley, Fassler & Kelly. Filed October 21, 1889.

Office Supreme Court U. S.
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Supreme Court of the United States.

JOHN H. GORDON AND OTHERS,
Appellants,

agst.

BENJAMIN H. WARDER AND OTHERS,
Appellees.

SAME,
Appellants,

agst.

ABEL HOOVER AND WILLIAM GAMBLE,
Appellees.

SAME,
Appellants,

agst.

CHAMPION MACHINE COMPANY,
Appellee.

SAME,
Appellants,

agst.

WHITLEY, FASSLER & KELLY,
Appellee.

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Appellants,
AGST.
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Appellee.

SAME,
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Appellee.

These are four appeals from judgments of the Circuit Court for the Southern District of Ohio dismissing the bill or complaint in each of the four

cases above mentioned. All of the cases were commenced in or about the month of November, 1884, the bill being the same in each.

The defendants Hoover and Gamble appeared by Parkinson & Parkinson, of Cincinnati, Ohio. The other three defendants appeared by Bowman & Bowman, of Springfield, Ohio.

Evidence was taken on the part of the complainants, in the case against Benjamin H. Warder, Asa S. Bushnell and John J. Glessner, and in the case against Abel Hoover and William Gamble.

Evidence was thereafter taken in the case against the said Warder, Bushnell and Glessner, on the part of the defendants, and rebuttal evidence, by the complainants, in the same case.

The defendants' evidence and the complainants' rebuttal were then, by stipulation, made a part of the defendants' case, in the suit against the said Hoover and Gamble, and it was agreed that the two suits should be argued together, the evidence in each being substantially the same.

It was afterwards agreed that the case against the Champion Machine Company and Whitley, Fassler and Kelly should abide the event of the two cases argued, and the records in those cases present only the pleadings, as agreed upon by stipulation, of the respective counsel, printed on page 91 of the record in the Hoover and Gamble case.

The cases were heard, substantially on the record in the case against Benjamin H. Warder, Asa S. Bushnell and John J. Glessner.

The record, as printed, is in a state of deplorable confusion.

The practice in the Northern and Southern Districts of New York, with which alone I am familiar, is to certify to this Court the printed books of evidence on the hearing in the Circuit Court. This brings the complainants' and defendants' evidence together separately and in proper order. But, in

this case, the officer making the transcript deemed it necessary to send every paper in his office bearing the title of the case *in the order of filing*.

When the *prima facie* case of the complainants had been taken it was not formally closed, but was adjourned indefinitely (fol. 125). Without waiting for the close of complainants' case, the counsel for defendants began to take answering testimony. The Master before whom the *prima facie* case was taken waited for it to be formally closed, and so the defendants' testimony was placed on file first, as was also the case with a part of the complainants' rebutting testimony, so that the testimony in the case really begins on page 601 of the record.

The condition of the record is certainly very much to be regretted, but when it was received the cases were so nearly reached that it was thought, by counsel, that reprinting would involve a great delay, and that, by a proper reference to the different parts of the record, it could be sufficiently understood by the Court, especially as the questions in the case do not arise upon disputed evidence, but are questions of law, arising upon substantially conceded facts.

Statement of the Order and Dates of the Different Depositions.

Complainants' *prima facie* evidence began at page 601, and on June 12, 1885, was closed at page 688.

The defendants began their answering testimony on July 13, 1885, at page 52 of the record. Up to September 2, 1885 (p. 312), this examination is all in relation to Gordon's patents of 1874 and 1875, with the exception of some expert testimony by the witness John F. Stewart as to Gordon's patent of 1868, which alone is involved in this appeal. The most of it will not, therefore, need any examination by the Court. The part of Stewart's testimony which

relates to Gordon's 1868 patent, No. 77,878, begins at Q. 38, page 222.

On August 3, 1885, defendants amended their answer so as to set forth an alleged anticipation by one Stephen D. Carpenter, of Madison, Wisconsin, as hereinafter stated.

On September 3, 1885 (p. 312), defendants' counsel took up the Carpenter anticipation, examining a large number of witnesses, and closing September 12, 1885 (p. 394). Examination of witnesses on same subject was continued on October 6, 1885 (p. 17), and finally closed October 9, 1885 (p. 36).

On October 26, 1885 (p. 36), defendants examined an expert as to the Watson, Renwick and Watson patents and certain models thereof, and another expert as to the knot tier of the defendants, closing their case on October 28, 1885 (p. 50).

The complainants began their rebuttal on January 6, 1886 (p. 397), examining a large number of witnesses as to the Carpenter anticipation, and closed the examination on that subject on February 5, 1886 (p. 543).

They continued such rebutting testimony on May 18, 1886 (p. 689), adjourning on May 20, 1886, to June 24, 1886 (p. 717). They continued on June 24, 1886 (p. 580), examining two witnesses, in the absence of defendants' counsel, closing on the same day (p. 583).

On July 27, 1886 (p. 718,) one witness was examined by the defendants, closing July 28, 1886 (p. 727).

On December 30, 1886 (p. 583), the two witnesses who were examined on June 24, 1886, were cross-examined by defendants' counsel, closing December 31, 1886 (p. 600), and complainants then closed their case.

The defendants then took testimony on June 2 and 3, 1887, begun on page 566, closing on page 569.

The defendants then changed their solicitors, and amended their answer for a third time (p. 578).

They then opened the case and took further testimony, beginning November 10, 1887 (p. 741), closing on the 12th of the same month (p. 785).

The complainants replied to this evidence, so far as they thought it material, beginning February 10, 1888 (p. 728), and closing March 1, 1888 (p. 741), and the testimony was then finally closed.

History of the Litigation.

The action was originally commenced upon three different patents, granted to said James F. Gordon, and held and owned by the several complainants at the time of the commencement of the suit. These three patents were respectively dated May 12, 1868; June 16, 1874, and October 26, 1875.

Testimony was originally given by the complainants, as to the ownership of these *three* patents, and as to the infringement thereof. But prior to introducing their rebuttal evidence, the complainants became satisfied, that, in view of the prior state of the art, the claims of these last two patents, alleged to be infringed by the defendants, contained no patentable invention, and, on May 18, 1886, the then counsel for the complainants gave the defendants the following notice (p. 689, fol. 1259):

> "The complainants, before proceeding to take their rebuttal testimony, hereby give notice that they withdraw from the case the patent of June 16, 1874, and October, 1875, and all the testimony introduced by complainants, in any way relating to the said patents, and also give notice, that, upon the hearing of this case, they will consent that the bill of complaint, as to said patents of 1874 and 1875 be dismissed, and the complainants hereby offer to strike out from the record of this case all of the evidence, on either side, relating to said patents of 1874 and 1875, so as to present to the Court, on final hearing, only the evidence relating to the patent of May 12, 1868."

The defendants declined to accept this offer, and the evidence, relating to those two patents, remains in the record, to the great complication and embarrassment of the case.

Referring to the record in the case against the said Warder, Bushnell and Glassner, the bill of complaint was filed November 7, 1884 (Rec., p. 11).

The answer was filed, denying the invention and alleging certain anticipations, January 5, 1885 (Rec., p. 7).

An amended answer was filed by defendants, July 11, 1885 (Rec., p. 14).

A second amended answer was filed October 5, 1885 (Rec., p. 16).

A third amendment was filed January 7, 1888 (Rec., p. 578).

Early in the year 1886, two of the original plaintiffs, James F. Gordon and David M. Osborne, departed this life, and, by an order of the Circuit Court, dated December 23, 1886, Mary A. Gordon, as executrix of said James F. Gordon, deceased, was substituted as plaintiff herein, in place of the said James F. Gordon; and Eliza W. Osborne, Frederick Harris and Thomas M. Osborne, as executors of said David M. Osborne, were substituted as complainants herein, in place of said David M. Osborne, deceased (Rec., p. 554).

A large amount of evidence was taken by both sides, and the case was heard, upon pleadings and proofs, in January, 1889.

On May 8, 1889, the said Circuit Court filed its decision directing the bill of complaint to be dismissed (Decision will be found on p. 785 of the Rec.).

Assignment of Errors.

1. The learned Circuit Court erred in deciding that anything was shown, in the prior state of the art, which rendered the first claim of complainants' patent void, unless it was so construed, that the *rake*

was one of the elements of the combination mentioned in said first claim of said patent.

2. Said Court also erred in deciding that anything in the proceedings before the Patent Office as disclosed by file wrapper and contents, produced in evidence by the defendants, had the effect of making the said first claim void, unless it was so construed as to make the rake an element of the said claim.

3. The said Court erred in deciding that the rake was one of the elements of the combination named in the said first claim.

4. So the Court erred in deciding that if not limited and restricted to a combination which included the rake, the said claim was void.

5. The said Court erred in deciding that the complainants were not entitled to invoke the doctrine of equivalents, or to a broad construction of the patent.

6. The said Court erred in deciding that a construction which would make the defendants' machine an infringement, would cover what the Patent Office had once rejected, with the acquiescence of the patentee.

7. The said Court erred in deciding that the device of the defendants was a distinct and different invention from that of the patent, because its binding apparatus was mounted on a frame, supported by the frame of the harvester, while portions of complainants' apparatus were supported by the harvester frame itself.

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8. The said Court erred in deciding that the first claim of the complainants' patent was not infringed by the machine of the defendants.

9. The said Court erred in directing a dismissal of the bill of complaint.

Nature of the Invention.

The invention of James F. Gordon, which was sought to be secured by his patent of May 12, 1868, was one which is used by all the leading manufacturers of harvesters and binders throughout the country, and is one which is absolutely necessary to the successful operation of such a machine.

It is well known that the length of grain greatly varies, and very frequently there is great variation in length, even in the same field. If a grain field is what is called "rolling," that is, composed of small hills and shallow valleys, the valleys are usually more fertile than the hills, and the grain is stronger and higher. The usual mode of cutting grain with harvesters, is to drive around the entire field, or around certain large portions of it. It follows, that, in cutting grain, in the same field, the length of the grain will vary a number of times in cutting around the entire field, or the portions selected.

It is plain that if the band is laid too near the butts, or too near the tops of the grain, that it will not hold well, and that portions of the grain will shake out and be lost. It is, therefore, an absolute necessity to lay the band in the centre of the grain, and it is a great convenience, and almost an equal necessity, in cutting grain, that the binder shall be so constructed, that the change of its position, in order to place the band in the centre, may be made *easily* and *promptly*.

Prior to the date of the Gordon patent of 1868, machines existed, or were patented, in which a gavel of grain, which had been deposited on the platform, was submitted to the action of a binding apparatus which put a band around the gavel and converted it into a sheaf. These bands were sometimes a wire, sometimes a cord, and sometimes

straw and in many cases the band was put around the gavel, and its ends secured by automatic machinery—that is, machinery which was put in motion by power from the horses which drew the machine (Renwick, fol. 1180).

But as I shall demonstrate hereafter, no one, prior to Gordon, had produced any machine in which the grain was automatically delivered, by the harvester, to the binder, and in which the binding arm and twister, or knot tier, were adjustable, with reference to the grain delivering mechanism of the harvester.

The machinery by which James F. Gordon accomplished this most desirable object is described in his patent of May 12, 1868, printed at page 4 of the book of exhibits. The particular machinery referred to, in the first claim, is shown at Fig. 1 of the drawings, opposite page 5, and is described in the patent as follows:

> " Attached to the side piece A of the frame, are bearings F and F^2, extending downward and receiving a horizontal rock shaft G. Attached to said rock-shaft is a second pair of bearings r and r^2, that receive a second shaft, G^2. To said shafts G and G^2 is attached the binding-arm H, the same extending toward the platform and over the twisting device. Said arm is so fitted to the shafts *as to be capable of being moved thereon in the direction of their length.* Beneath said shafts G G^2, and connected to shaft G just outside of the bearings of arm H, is a frame, W, that is also so fitted to the shaft as to be capable of moving thereon longitudinally. Said frame is bent around so as to bring the ends thereof at right angles one with the other. The end extending toward the platform is bolted to the frame-work W^2, carrying the twisting device and its appurtenances. Said frame W^2 is held in guides or ways parallel with the shafts carrying the arm H, and is capable of a longitudinal movement—*that is to say, a movement parallel with the grain as it lies upon the platform.*"

The patent then describes certain devices for sliding the frame, which are not made a part of the claim, but left to the ingenuity of the particular builder.

The patentee goes on:

> "The adjustment is effected as follows: The driver, by moving or oscillating lever N, which connects with frame W by means of rod m^2 and standard m (*said frame* W *being so fitted to shaft* G *as to come in contact with the bearings of arm* H), gives the binder and twister and their several accessories a longitudinal movement upon the rods G G^2, which brings them and the wire, at any suitable point, to bind the sheaf in the centre."

That is to say, the twister and its accessories, which accessories are the clamp that holds the end of the wire while it is being put around the bundle, and the knife which severs the wire, after the binding is completed, are mounted upon a horizontal sliding frame, which is parallel with the shafts which support and actuate the binding arm. This binding arm slides upon said shafts, and the frame, which carries the twister, has an arm W, to which is attached a stud on each side of the binding arm, so that when the frame work carrying the twister, is moved frontward or rearward, the arm and studs cause the binding arm to move at the same time and preserve its relative position to the twister. The nature and operation of this device is thus described by Mr. Renwick, at folio 1181:

> "In order to get rid of this difficulty, which I have before spoken of, Mr. Gordon mounted the binding arm, as he calls it in his claim, upon the same carriage with a twister, this twister being for the purpose of uniting the ends of the band (in Gordon's case wire), it being essential that this twister should always bear the same relation to the binding arm, because the binding arm

carries the wire, surrounds the gavel with it, and puts the wire where it can be acted upon by the twister. This binding arm is represented in Model Gordon 1868 Patent with a reel or spool mounted on top of it, and the twister is secured in such a manner that the end of the binding arm can come into close relation with it when the binding arm is down. The carriage is represented in the model by a piece of metal painted drab color and a frame of brass which carries the twister and its adjuncts and is secured thereto. In the patent the binding arm is described as being mounted on a rock-shaft, and the binding arm consequently moves up and down—upwards to stretch sufficient wire to form a band and downwards to put this wire around a gavel and carry the wire so that it may be acted upon by the twister, which twists two parts of the wire together so as to bind the band in place and confine the stalks together in a sheaf.

Now, this carriage is not stationary with respect to the cutting apparatus of the machine, but is capable of being slid or adjusted forwards or rearwards, carrying, of course, the binding arm, and the twister and its accessories with it, the accessories of the twister being a contrivance for holding the end of the wire when the binding arm rises and a contrivance for cutting the wire so as to sever that portion which is around the gavel from the wire which is on the spool and led along on the binding arm. It is clear, therefore, that the carriage, with the binding arm, and the twister and its accessories, may be set at different distances measuring rearward from the cutting apparatus, and may be so set as to put the band around the sheaf at different distances from the butts of the grain, so that the band will occupy the middle of sheaf or nearly so."

Mr. Renwick also states the elements of the first claim of the patent (fol. 1184) to be as follows:

1. "A binding arm which puts the wire around the gavel and places it in such relation

with the twister that the twister can act upon it."

2. "'An automatic twisting device,' which words, I understand, refer not only to the precise twisting device in the patent, but to known substitutes or equivalents thereof."

3. "A carriage capable of adjustment in the direction of the length of the grain, that is, rearward and forward, and by means of which the twister and the binding are so combined, with relation to each other, that they always continue in the same relation to each other, but are nevertheless capable of simultaneous movement, along with the carriage, to the same extent, and in the same direction with each other."

It may be said, therefore, that the invention of Gordon consisted in this: *In so arranging the binding arm and twister, or its equivalent, that while they would continuosly act with each other, for the purpose of placing the band around the grain and uniting the ends of the band, the driver could, instantaneously, change their position with reference to the grain-delivering mechanism of the harvester, so as to lay the band in the centre of the bundle, without stopping the machine, or dismounting from his seat.*

Any subsequent machine, in which this result is not produced, is no infringement; any prior machine in which this result was not produced, is no anticipation of the Gordon invention.

History of the Invention.

In the Gordon harvester and binder the grain is cut, as in all reapers, by a reciprocating knife at the front edge of a platform, and, by means of a reel, laid on said platform—heads all one way. A reciprocating rake was so arranged that it swept automatically at intervals over the platform, and gathering the grain thereon into a gavel pressed it against

a wire which passed through an eye in the end of a binding arm, the lower or free end of the wire being held in a clamp placed close to a device called a "twister," so that the wire, at the time that the gavel was raked against it, was nearly vertical between the clamp and the end of the binding arm. At the moment the gavel was so brought against the wire the binding arm encircled it and the end of the arm dropped between the grippers forming the clamp. The two ends of the wire were then caught by a twisting-hook, as they were cut free from the clamp and arm, and twisted into a species of knot; the bundle was discharged as the rake and binding arm resumed their original position to rake and bind the succeeding bundle.

Mr. James F. Gordon, who died during the pendency of the action, testified (fol. 1108) as follows:

> "I made my first binder model in 1862 and made my first full-sized machine in 1864, and in June of that year I filed my caveat. I obtained my first patent for a harvesting and binding machine May 12, 1868. Down to about the time I obtained my first patent, above referred to, I was without means or tools of my own, consequently I labored under great disadvantages, and in the spring of 1865 I was obliged to cease operations on my binding inventions, for the reason that my father was unable to provide me with the necessary funds to continue my experiments, and in March, 1865, I started for St. Louis, where I was employed by the Government in the quartermaster's department. The war coming to a close soon after my arrival there, I was obliged to seek other employment, and in October I went to Kalamazoo, Michigan, thence to Detroit, where I finally obtained a situation, at small wages, in the shops of the Michigan and Indiana Bolt and Nut Company. I think that was the name of the concern. In the spring of 1866 I returned to Kalamazoo and engaged in the drive-well business. While there, some time in the

> fall of 1866 (or winter), I succeeded in making an arrangement with a party to build a full-sized experimental machine and take out my patent. The arrangement was a verbal one, and after working a few weeks under it the said party withdrew, and I was obliged to carry on the business of completing the machine as best I could, my only source of revenue, while working on the same, being what little I could make by driving such wells as I could find to do about the Village of Kalamazoo.
>
> After completing the said machine, in the fall of 1867, I was obliged to dispose of certain interests in my invention to enable me to obtain funds to build a model and take out my patent and pay off the debts I had incurred in constructing the machine. Soon after applying for my patent, above referred to, I came to Rochester and built another machine which was operated in the harvest field, in the vicinity of Rochester, in July and August, 1868."

The first full-sized machine made by Gordon in 1864 contained the adjustable features described in his first claim of the patent of May 12, 1868 (fol. 1111).

While at work in St. Louis in 1865, he constructed a model of his harvester and binder, from which he made his machines of 1867–1868 (fol. 1123).

The machine of 1868 was tried in the field on the farm of Archibald Renwick, on August 4, 1868, in the presence of a large number of persons, who signed a certificate that the binding device was perfect, and left nothing to be desired (fol. 1149).

Afterwards Gordon enlarged the space for the discharge of the bundle, which required a larger drive wheel and frame (fol. 1149).

A machine built in 1868, after the harvest of that year, was exhibited at the Michigan State Fair and was awarded a medal for self-raking and binding harvester. Another machine was exhibited at St. Louis, the same year, and took the prize of $100 for

the most important invention patented within the three years then last past (fol. 1115).

The same machine was exhibited in 1869 at the Michigan State Fair, and received a medal and diploma (fol. 1115).

Gordon was then obliged to suspend operations for a time for want of funds, but in the winter of 1870–1871 he attached his binder to a "Marsh Harvester," which elevated the grain over the drive wheel and thereby obviated the difficulty in discharging the bundle, which was the only serious objection to the Gordon 1868 machine. He completed this machine prior to the harvest of 1871, and cut and bound with it a large quantity of grain. In this machine (Gordon self-binder combined with the Marsh Harvester), the binding arm and automatic twister were adjustable in the direction of the length of the grain (fols. 1116–1337).

The facts stated by Gordon, that in 1864 he did make a full-sized binder, having this shifting motion is strongly corroborated by the witness McPherson (fols. 1249–1250).

James F. Gordon is also fully corroborated by the testimony of John H. Gordon, at folios 1086, 1087, as follows:

> "Q. 3. Have you read and do you understand the Letters Patent granted to James F. Gordon May 12, 1868?
>
> A. I have; and I think I understand them.
>
> Q. 4. Were you acquainted with the efforts, and different experiments, in constructing a harvester and binder, which resulted in the invention secured to him by said Letters Patent?
>
> A. I was.
>
> Q. 5. Did you have an opportunity to examine the different models and machines constructed by him from time to time prior to the granting of said patent?
>
> A. I did.
>
> Q. 6. About what time did you first see either the model or a machine made by James F.

Gordon, which contained the device for adjusting the binding arm and twister in the direction of the length of the grain?

A. I saw both. I saw a model, containing such a device, some time in 1862 or 1863. I saw a full-sized machine, containing this device, at various times while he was constructing it in 1864.

Q. 7. Where did you see the model, in 1862 or 1863?

A. He constructed it on a farm we were working, and owned by James Wadsworth, in the town of Caledonia, Livingston County, New York. I saw it there.

Q. 8. Please describe the mode in which the binding arm and the twister were made adjustable in the model of which you have spoken?

A. The binding arm was mounted on a shaft and the twister was mounted on a frame, which was connected with the binding arm. They were moved by a lever within reach of the driver's seat.

Q. 9. Was the arrangement such that the binding arm and twister were moved separately or together?

A. They were moved together. The frame on which the twister was mounted was connected with the binder so that they moved simultaneously.

Q. 10. In the large machine that you saw in 1864 how were the binder arm and twister made adjustable?

A. The same way I have described; the same way as in the model."

Briefly stated, therefore, and in their proper connection, the facts in relation to the history of this invention are these:

James F. Gordon conceived of this invention at least as early as some time in the year 1863.

On June 27, 1864, he filed a *caveat*, which, as we shall hereafter see, described the adjustable feature of the binder, substantially in the way it was patented, on May 12, 1868.

The same summer he made a model and also a full-sized machine, in each of which the binding arm and twister were capable of adjustment in the exact mode described in the patent. Owing to his narrow means he was obliged to suspend his work in 1865, but even then he occupied his spare hours in producing a model of a harvester and binder with this adjustment.

In 1866 he again commenced the manufacture of a harvester and binder, containing this feature, but was delayed by the failure of the parties who agreed to furnish him with funds.

In 1867 he made a model substantially like his patent, and another machine in 1868, which was tried in the field at Rochester, before a large number of persons and proved a complete success.

On December 27, 1867, he made application for his patent, which was granted to him on May 12, 1868.

In 1868–1869 he exhibited this machine at different fairs, for which he received a premium of $100, for the most important invention within the preceding three years, also medals and diplomas.

Finding that the frame was so near the ground that it was difficult to discharge the bundle, after it was bound, he enlarged his machine in 1869, and made a larger drive wheel and frame. Finding it still difficult to discharge the bundle, he, in the winter of 1870–1871, concluded to attach his binder to a Marsh harvester, a machine which had then just appeared, and which elevated the grain over the drive wheel, leaving ample room for the discharge of the bundle. He made several of these machines, trying them with various improvements, which proved so successful that the great firms of C. H. & L. J. McCormick, and Gammon, Deering & Steward, of Chicago, took licenses under his patents, and the last named firm, at least, manufactured a large number of machines under his patents (fol. 1122).

Mr. Gordon, on May 15, 1875, applied for a patent,

covering, among other things, the combination of his adjustable self-binder with a Marsh harvester, which was issued on October 6th of the same year.

It is quite true that the machines made under the Gordon patents were not extensively manufactured and sold, but there is nothing in the record to show that the reason was that they were not successful machines. The real reason their use was discontinued was quite different.

In 1874 Marquis L. Gorham produced his "Automatic Binder" (fols. 280 and 284). This was a string binder, and the new and valuable feature in it was that, instead of relying upon the driver to judge when the bundle was sufficiently large, and to trip the binding machinery, this binder contained a device by which the *bundle* itself was made to set the binding machinery in motion, whenever it became sufficiently large.

The old wire binders, like those of Gordon and the witness S. D. Locke, went almost immediately out of use, and their place was taken by binders of the Gorham and Appleby type. But on all of the machines, whatever type of binder was employed, the *adjustable principle* of Gordon's harvester and binder was preserved.

There are six defenses relied upon by the defendants and apparently recognized by the Court; and, although, as is usual, the defenses are not quite distinct and separate from each other, they may, for the purpose of the argument, be specified as follows:

1. Anticipation by prior patents, which, if not sufficient to avoid the claim, are at least sufficient to make the *rake* an element of the first claim.

2. A narrowing of the claim, by the action of the Patent Office, acquiesced in by the patentee, which, in some manner, also renders the first claim void, if the *rake* is not made an element of the combination.

3. Public use prior to the patent, substantially confined to a single anticipation, of Stephen D. Carpenter.

4. That the invention was not *useful* or practical.

5. That the complainants' patent shows a "Combined harvester and binder," while the machines of the defendants are "Harvesters combined with binders," which fact, in some inscrutable manner, prevents the machines of the defendants from containing substantially the device described in the Gordon patent.

6. Non-infringement. Though it is quite true that the decision of the Court below resolves the entire question into one of infringement or non-infringement, I suppose that the defendants are not bound by that decision, and I will, therefore, take up these different defenses in their order.

Anticipation by Prior Patents.

The following patents antedated Gordon's patent of 1868, though some of them do not antedate his actual invention. They are all that were explained by the defendants' experts as having any application to Gordon's patent of May 12, 1868.

Letters Patent to S. S. Hulburt, Feb. 24, 1851.
" " Watson, Renwick & Watson, May 13, 1851.
" " Watson & Renwick, Dec. 6, 1853.
" " Allan Sherwood, Sep. 14, 1858.
" " " " Aug. 30, 1859.
" " George Olney Gooday, Sep. 21, 1866.
" " John E. Heath, July 22, 1850.
" " Silas G. Randall, July 22, 1856.
" " Warder, Brackaw & Childs, Apr. 20, 1858.
" " W. L. Childs, Mar. 2, 1858.
" " Theodore Palmer, Jan. 13, 1863.
" " Storle & Mason, Dec. 3, 1867.

From these patents the Circuit Court selected *five*, which, it is claimed, had such a bearing upon the construction of the Gordon patent of 1868 as to make the first claim void, unless it was so construed as to make the rake a portion of the combination.

I shall notice these five patents more particularly hereafter. They are

Letters Patent to S. S. Hulburt, Feb. 24, 1851.
" " Watson, Renwick & Watson, May 13, 1851.
" " Watson & Renwick, Dec. 6, 1853.
" " Allan Sherwood, Sep. 14, 1858.
" " " " Aug. 30, 1859.

The Gooday patent (Book of Exhibits, p. 221) is explained by Mr. Renwick (Rec., fols. 1285–1289) as follows:

> "I do not find in said Gooday patent the adjustable binder carriage, with the binder arm and twister of the Gordon patent, nor anything that could be used in place of that, even if the Gooday machine were made falsely, with a single needle and applied to a reaper. There is not even a hint in Gooday about binding gavels in the middle with a single band, or even of making a straw mat with a single seam in it, much less of putting that single seam in the middle of the length of straw by making use of the adjustability of the needle."

The patent to John E. Heath (Book of Exhibits, p. 74), is thus referred to by Mr. Renwick (fol. 1291):

> "The Heath patent has a *hand*, not an automatic binding apparatus, and is not adjustable."

Of the Silas G. Randall patent (Book of Exhibits, p. 123), Mr. Randall (fol. 1290) says:

> "The Randall patent is for a raking adjustment, and does not describe any binder."

Of the Warder, Brackaw & Childs patent (Book of Exhibits, p. 132), Mr. Renwick (fol. 1290) says:

> "The patent of Warder, Brackaw & Childs has no binder at all."

Of the patent to Willis L. Childs (Book of Exhibits, p. 132), Mr. Renwick (fol. 1291) says:

> "The Child's patent of March 2, 1858, has an automatic binding apparatus, but it is not adjustable."

Of the patent to Theodore Palmer (Book of Exhibits, p. 155), Mr. Renwick (fol. 1291) says:

> "The Palmer patent has a binder or binding apparatus, but this apparatus is not adjustable."

As to the patent to Storle & Mason (Book of Exhibits, p. 175), Mr. Renwick (fol. 1291) says:

> "As I have not the Storle & Mason patent before me, I refer to Mr. Stewart's testimony at folio 2661 (in this Record, fol. 472). He says that it is almost identical in respect to the motions of the rake with that described in the Palmer patent, and that Storle & Mason has an automatic binder. As he says nothing about the binder being adjustable, I infer that this machine had not an adjustable binder.
>
> "I have now had handed to me a copy of the Storle & Mason patent and find that it has not an adjustable binding apparatus."

Several of the patents alluded to by the defendants' experts have not been printed in this record, and, of course, I do not discuss them.

Outside of the five patents expressly referred to by the Court below, in its opinion, it is plain that there was nothing in the state of the art, prior to Gordon's invention, which showed a binding arm and twister capable of adjustment so that they could be moved, simultaneously, to place the band in the centre of the bundle.

The five patents, mentioned by the learned Court, perhaps require a more careful examination.

In their patent of May 13, 1851 (Book of Exhibits, p. 82), Messrs. Watson, Renwick & Watson seem to have attempted to advance the art of cutting and binding grain twenty years at a single bound. The authors of that invention seem to have discovered the desirability of most of the improvements of the modern harvester, except the elevator, and that was contained in the Watson & Renwick patent of 1853. As the grain fell upon the platform it was to be carried by a rake over the platform to an automatic binder, which was to bind it with a cord, tie the knot, cut the cord, and discharge the bundle. Unfortunately, the execution of these ideas was not equal to the conception. The ingenious and complicated machine never progressed beyond the modest condition of a Patent Office model (fol. 1281), and I am convinced that no one can read the specification of the patent without arriving at the conviction that no machine built according to that description would ever successfully bind a single bundle of grain.

But the defendants having, in fact, nothing else to depend upon, have insisted, do insist, and, for all time to come, will continue to insist, that this abortive machine describes, substantially, the invention patented by James F. Gordon, in 1868, and specified in the first claim of his patent.

Messrs. Watson, Renwick & Watson would not have been sufficiently in advance of their age, if they had not contemplated some means of causing the band to be laid in the centre of the gavel. They proposed to accomplish this desirable result, how? By sliding the binder-arm and knot tier from one position to another? Not in the least; by moving the cutting apparatus frontward and rearward, which involved a narrowing and widening of the platform of the machine. When the bands came too near the heads of the grain, they proposed to set

back the knife and narrow the platform, so that the grain would fall further to the rear. When the band was laid too near the butts, they proposed to set forward the knife and widen the platform so that the grain would fall further forward.

To show how little this device resembled sliding the binding apparatus to the desired position, I quote from the evidence of Mr. Renwick (fol. 1275):

> "In order to make the adjustment described in the patent, you must first alter the platform by putting in or taking out slats, according as the cutter-bar is adjusted forwards or rearwards.
>
> SECOND.—Adjust the raking apparatus as described in the patent.
>
> THIRD.—Take out the bolts, not shown in model, which hold the finger-bar and cutting apparatus in place.
>
> FOURTH.—Move the cutting apparatus in its groove, put in the bolts and bolt it fast in its new position.
>
> FIFTH.—Take out the lever that moves the cutter-bar, first disconnecting it.
>
> SIXTH.—Substitute for it a different lever.
>
> SEVENTH.—Unloosen the fulcrum of that lever and move it to a new position; and
>
> EIGHTH.—Connect the new lever to the cutting apparatus, and to the pitman or connecting rod that drives it."

Mr. Renwick well added to this statement:

> "Now that is not what is commonly known as an *adjustment*, but is more like *reconstruction*."

When it is recollected that the length of grain in the same field often widely varies, and that the binder may need to be adjusted several times in once going around a field of grain, the practical value of a so-called adjustment, by which you have to stop the

machine and go through these eight manipulations, may be estimated.

The patent also contains the following paragraph (Bk. Exhibits, p. 92):

> "In place of making the cutting apparatus adjustable, with respect to the binder, *it may be advantageous, in some cases*, to make the latter adjustable in respect to the former."

This, we respectfully submit, is not a description of an invention. It is a mere suggestion that a certain mechanical result may be advantageous, without even a hint as to the means by which that result can be obtained.

And yet, upon this narrow foundation, the defendants have built a superstructure of vast, though vague, dimensions, which, as they claim, avoids all subsequent patents for adjustable binders.

They first assert that the binder in the Watson, Renwick & Watson machines was supported upon a *detachable* frame. This assumption is contrary to the drawings, and contrary to the plain language of the specification. It rests on two expressions in the specification which have a very different meaning from that given to them by the defendants' counsel and experts.

FIRST.—The patent does state that

> "the frame consists mainly of two sections, one of which sustains the binding apparatus and the mechanical devices, by means of which, motion is imparted to the cutting, raking and binding apparatus from the driving wheel, *which is also attached to this portion of the frame*" (Book of Exhibits, page 83).

The defendants interpret the words "the frame consists mainly of two sections" to mean that the part of the frame to which the binding apparatus is attached is one distinct and separable section and the rest

of the machine is the other section. But this is not what the patent says, nor is it what the patent means. The patent means that there is one frame, composed of two "sections inseparably connected." One section is the platform, carrying the finger-bar, the cutter and the rake, and to which the grain wheel is attached, the other is the part of the frame which carries not only the binding apparatus, but the machinery which actuates the cutter, the rake and the binding devices, and to which the drive-wheel is attached; and the part of the frame directly connected with the drive-wheel might as well be "detachable" as the part which supports the binding apparatus.

SECOND.—The specification also contains these words:

> "The binding *apparatus*, being independent of the cutting and raking apparatus, may, with advantage, be applied to many of the harvesting machines now in use, or it may be used in connection with a rake, to bind grain which has been cut and left in the swath by a mowing machine."

The defendants have assumed this to mean that the *frame* on which the binding apparatus is mounted, is independent of the frame which is connected with the drive-wheel, and which carries the actuating devices connected with the cutter and rake. This idea, as we have seen, is contradicted by the express language of the patent.

The plain meaning is that the "binding apparatus," that is, the binder-arm, the knot tier and the various wheels, shafts and pinions which operate them, may be separate from and independent of the cutting and raking devices.

The patentees never meant that a portion of their *harvester frame* could be cut out and injected, bodily, into another machine. They meant that

the binder arm, knot tier and their actuating devices, could be mounted on another machine, which contained its own cutting and raking devices, and be operated. There is not a line in the drawings, not a syllable of the specification which gives the least countenance to the idea that any portion of the *frame* of the Watson, Renwick & Watson machine was detachable from the rest.

But, on the faith of the two expressions I have quoted above, the defendants, by cutting and hewing and distorting the machine of the patent, and by removing material parts of the same and substituting others that the patentees never dreamed of, have made a false, deceitful and fraudulent model, which they have named "Model of Watson, Renwick & Watson Machine, with detachable binder." The full details of this iniquity are too long to quote. They will be found fully and particularly stated in the evidence of Mr. Renwick (fols. 1267–1271). Suffice it to say that the model is a monstrous perversion of the true intent of the patentees, as shown by their specification and drawings. Having produced this model, which they falsely represented as being made, according to the description in the patent, with a detachable binder *frame*, the defendants proceeded to show how this bogus *detachable* frame might be made *adjustable*. To do this they were obliged to make still further material and extensive alterations in the machine. The exact details are fully stated (fols. 1272–1275) in the evidence of Mr. Renwick.

Having built up, not from anything in the Watson, Renwick & Watson patent, but from their own knowledge of the state of the art down to the time of their examination, a supposititious plan for making the binding apparatus of that patent adjustable, they claim that this nondescript production is sufficient to destroy the subsequent patent of Gordon.

Again, there are no indications in the Watson,

Renwick & Watson patent that the patentees ever dreamed of a binder which should be adjustable, in the same sense that the binder is adjustable in the Gordon patent. On the contrary, a careful consideration of the patent and attendant circumstances will show that they could have had no such idea.

I have already defined the gist of the Gordon binder to be a binding apparatus, consisting of a binder and a twister, or knot tier, with its accessories, which are so combined with the grain delivering mechanism of a harvester that the positions of of the binding-arm and twister can be simultaneously adjusted to lay the band in the centre of the grain by a movement of the hand of the driver without dismounting from his seat or stopping the machine.

In the entire specification of the Watson, Renwick & Watson patent there is not the slightest suggestion that any *such* adjustment was in the minds of the patentees.

1. If the patentees of the Watson, Renwick & Watson machine had the remotest idea of such a mode of operation, is it conceivable that they would have described, as the *preferable* mode, a plan by which the driver would have to stop the machine, dismount and make eight distinct mechanical alterations in the machine before the platform and the binder would occupy the proper relative positions?

2. In 1853 Edward S. Renwick and Peter H. Watson, the Renwick and one of the Watsons of the patent of 1851, produced another harvester, in which, instead of making the binding apparatus adjustable, they proposed an entirely impracticable plan of moving the top of the elevator towards or from the butts of the grain for the purpose of laying the band in the centre. If they had even then any idea of producing the same result by sliding the binding apparatus to and fro, they never would have resorted to such a device.

3. There is not the slightest intimation in the Watson, Renwick & Watson specification that, when they spoke of making the *binding apparatus* adjustable, they contemplated sliding it to and fro, and thus altering its position with reference to the platform.

The language is entirely consistent with the idea that the binding-arm was to be unfixed and fixed again in the proper place, and that the eyeletter or knot-tier, the spring nippers, the slides and the knife were to be moved separately in the same way. That is the mode of adjustment that, as the evidence shows, has been employed in several cases, and *non constat*, that was what the patentees meant if they had any *definite* meaning.

4. But if they meant to adjust the binding apparatus by sliding the binding-arm, and by sliding the knot-tier and its appurtenances, with reference to the platform, there is no hint in the patent that they had conceived the idea of sliding them *simultaneously*. That, as we have seen, was the gist of the Gordon patent, to move the binding-arm and the other binding devices into position at the same time, and to the same distance, and have them continue to "register" with each other, and operate together, in whatever position they were placed. There is not a lisp of such a construction in the entire specification of the Watson, Renwick & Watson patent.

5. But if they meant to have the binding machinery adjustable, and adjustable by sliding, and by sliding simultaneously, there is still no description in the patent of the way in which these desirable results could be accomplished, and the patent cannot, therefore, be used to destroy subsequent invention effecting the suggested result. The statement in the patent amounts to this, that it occurred to the patentee that it might in some cases, not particularly speci-

fied, "be advantageous" to have a machine operate in a particular way

I may here suggest that it is impossible to conceive of any "case" in which a sliding binding apparatus, like Gordon's, would not be preferable to an adjustable platform, like that of Watson, Renwick & Watson.

But it is claimed that, after the suggestion above mentioned, no one could sustain a subsequent patent for the means by which the machine could be made to operate as suggested. There ought not, at this late date, to be the slightest doubt as to the rule of law on this point. No principal of patent law is better settled than that, to avoid a subsequent invention, a patent or printed publication must describe the thing subsequently patented with such particularity that a person skilled in the art could construct it from the description alone without further experiment. I understand that the rule as to patents and printed publications is the same.

It was thus stated by the Supreme Court of the United States in *Seymour* v. *Osborne* (11 Wall., 555):

> "Patented inventions cannot be superseded by the mere introduction of a foreign publication of the kind, though of prior date, unless the description and drawings contain and exhibit a substantial representation of the patented improvement in such full, clear and exact terms as to enable any person, skilled in the art or science to which it appertains, to make, construct and practice the invention to the same practical extent as they would be enabled to do *if the information was derived from a prior patent.* Mere vague and general representations will not support such a defense. * * * The account published, to be of any effect to support such a defense, must be an account of *complete and operative invention capable of being put into practical operation.*"

In the case of the "*Cawood Patent*" (94 U. S. 704) the Supreme Court applied the same rule to a prior patent. The defendants gave testimony tending to prove that by the application of ordinary mechanical skill the machine of the former patent might be altered so as to perform the work of the Cawood patent, which is exactly analogous to the attempt made by the defendants in this case. The Court said:

> "That, however, evades the question to be answered, which is, whether the specification was sufficient to enable a mechanic, skilled in mechanical art, to construct and carry into practical use the Cawood machine, or, in other words, *whether whatever is essential to the Cawood machine could be read out of the prior specification.*"

In *Jemsen* v. *Keasbey* (24 Fed. Rep., 144), Judge Butler said of certain printed publications:

> "The publications relied upon show nothing more than *suggestions* and speculations of scientific writers, *who had never tested the practicability of their suggestions*, or demonstrated the truth or value of their speculations."

It is equally true that the reference in the Watson, Renwick & Watson patent to a binder, adjustable with regard to the platform, was a mere suggestion which had never been reduced to practice, much less tested by patentees.

In the case of *Nathan* v. *N. Y. Elevated Railroad* (2 Fed. Rep., 225), the patent sued on was for a combination of the "Gifford Injector," with an apparatus for lifting water to the injector, so as to "prime" or start such injector.

Judge Wheeler said, in reference to a prior patent, relied upon by defendant:

> "This patent gives no information as to *how* a lifting apparatus can be combined with a Gif-

> ford injector. *It merely says that this may be done, but leaves others to invent the mode of doing it.*"

I submit that no apter language could be used, if Judge Wheeler were speaking of the so-called "anticipation" of Watson, Renwick & Watson, even on the supposition that they contemplated a binder and tier simultaneously moved.

> "Mere hints at the result in question, or statements *to the effect that such a thing can be done*, or such a result effected, *without showing how*, will not answer."
>
> Parker *v.* Stiles, 1 Fish., 336.

It seems too plain for argument that the mere suggestion that a binder, adjustable with regard to the platform, "might be advantageous in some cases" without even a hint as to the mode of effecting the result, cannot anticipate a patent for the *means* of making it adjustable.

We have already seen that the patent contains no language indicating that the *frame* upon which the binding apparatus, as a whole, is supported, is movable or adjustable with reference to the other parts of the machine for any purpose.

It is true that the patent says that the *binder* may be made adjustable, &c.

At the present time, and after years of subsequent invention, the term "binder" is commonly applied to the binding apparatus, and the movable and adjustable frame which supports or contains it, taken together. But at the date of the Watson, Renwick & Watson patent, the term "binder" had no such meaning, for no such device was in use, or was known to the patentees; therefore, when they said "binder," they meant the binding apparatus, distinct from the frame. That is proved by claim 3, where the patentees speak of moving the *binding*

apparatus (not the *binder*) nearer to or farther from the front of the platform.

Again, it is impossible to make the frame which supports the binding apparatus movable without directly contradicting the plain instructions of the patent. That declares that the same frame supports the various devices which actuate the cutter and the rake, and *is attached to and supported by the drive-wheel.* In order to make the binder *frame* adjustable, you must first reconstruct the machine and produce a frame which does support the binder, but which is *not* attached to the drive wheel, and does *not* support the gearing which connects the cutter and rake with the drive-wheel. Such a construction may result in a good machine and a useful invention, but, obviously, it is not the frame described and patented by Watson, Renwick & Watson. It is a new and distinct creation.

It is worthy of observation that though the learned experts of the defendants, instructed by their knowledge of the art for the last thirty or forty years, by making the machine over and ignoring the plain requirements of the patent, have produced a movable binder frame which carries the apparatus for compressing the bundle and encircling it with a cord, they have not even attempted to show how the knot tier of the Watson, Renwick & Watson patent could be moved simultaneously with the binding arm, and continue to operate with such arm in any position which it might be placed. In fact, the model of the defendants' shows no knotting mechanism of any kind, and it is fair to presume that the problem presented to the experts was too much for them (fol. 1066).

The defendants' expert, Mr. Quimby, seems to think that a certain brass plate, in the Defendants' Exhibit "Model of Watson, Renwick & Watson Machine with Binder Adjustable," which brass plate is screwed to the feet of the curved pieces T T, and

extends under the platform, represents the knot tier (fol. 1410). But the knot tier, as shown by Figs. 11 and 12 of the drawings, to which Mr. Quimby refers, is not a *horizontal* but a *vertical* plate, with the knotting devices projecting from the side of the plate. How these knotting devices could work on a flat plate, how the needle arm and the shaft which actuates the knotting devices, and which, in the patent, are adapted to a *vertical plate, some inches above the platform*, can be changed, so as to operate with *a horizontal plate* below the platform, is all an inscrutable mystery. Mr. Quimby is not only silent on the subject, but has entirely misunderstood the drawings, supposing that the tier-plate is horizontal instead of vertical (Book of Exhibits, fol. 124).

When we consider:

FIRST.—That the patentees of the Watson, Renwick & Watson patent never contemplated an adjustment on the Gordon principle;

SECOND.—That if they did, they confined themselves to a mere suggestion, and gave no information as to *how* the adjustment was to be made;

THIRD.—That in inventing a way of carrying out the suggestion according to their own ideas, the defendants' experts have so altered the machine of the patent as to make a substantially different construction; and

FOURTH.—That even with such extensive alterations they have found no way to move the binder arm and knotter together, we think that we have substantially disposed of the so-called "anticipation" of Watson, Renwick & Watson.

The second patent cited by the Court, that of Watson and Renwick, will be found at page 94 of the Book of Exhibits.

There is no pretense that this patent contains a binding arm, and twister, or knot tier, that are, in any manner, adjustable. It is thus described by Mr. Renwick (fol. 1281):

> "Q. 22. Do you find in the Watson and Renwick patent of 1853 the adjustable device, described and shown in the Gordon patent of 1868, and mentioned in the first claim thereof?
>
> "A. No; I do not, nor any equivalent for them. In this Watson and Renwick machine the inventors intended to make the upper ends of the elevating bands adjustable from front to rear of the machine, hoping thereby to be able to deliver the gavel centrally to the binding apparatus; but neither the frame on which the binder and knot tier are mounted, nor the binder or knot tier separately, are adjustable in a machine made in accordance with the Watson and Renwick patent, and the model shows that they are non-adjustable, the whole frame of the machine being one frame, and the posts that support the binding apparatus being fastened into that frame with mortice and tenons."

Inasmuch as the defendants do not hesitate to claim that Renwick and the Watsons had in their minds some definite and practicable mode of making the binding apparatus adjustable, I desire to call the attention of the Court to what they adopted, as *a preferable mode of adjustment.*

In this patent the grain was delivered to the binder, not by a rake under the platform, as in the Watson, Renwick & Watson device, nor by a rake over the platform, as in the Gordon machine, but by elevator belts, which were intended to take the grain from the platform, raise it over the drive-wheel, and deliver it the binding apparatus. The way in which this elevator was made adjustable is described on page 103 of the Book of Exhibits.

The upper rollers, over which the elevating bands pass, were made tubular, in such a manner that

might be shifted frontward or rearward upon the shafts which supported them.

If the Court will take the trouble to read the description of the patent it will see what an expensive, complicated and inefficient method was adopted by the patentees to make the delivering mechanism adjustable, when, as is claimed by the defendants, these same patentees had a clear and distinct idea of making the binding apparatus adjustable with reference to the delivering mechanism; and, after all was done, it was perfectly plain to anyone acquainted with mechanics, that the contrivance was entirely impracticable. Aside from the complication of the device and its multiplicity of parts, it is plain that when the conveyer belts were shifted rearwards, the tension of the front belts would be changed; they would adhere more closely to the rollers and would travel faster than the rear belts. The consequence is that the tops of the grain would move faster than the butts, and the ends of the stalks could not be in the same plane when delivered to the binder, and so when the conveyer bands were shifted to the front, the rear bands would be tightened and the butts of the grain would be carried up faster than the tops. This of itself is a sufficient reason why, as Mr. Renwick, the brother of one of the patentees, states, this elaborate and complicated machine never went into actual operation (1281).

The third patent mentioned by the Court, that to Allan Sherwood, September 14, 1858 (Book of Exhibits, p. 139), is thus described by Mr. Renwick (fol. 1282):

> "In the machine described in said patent there is a sweep-rake, which moves the grain across a platform composed of slats, very similar to the platform and raking apparatus of the Watson, Renwick & Watson Patent. This sweep-rake carries the grain over a series of curved fingers, something like the fingers of

the hand-reaping cradle. After the grain is deposited on these fingers, the fingers *are lifted by hand, not by the operation of the machine*, and dumped into a semi-circular trough, evidently made of metal. By pressing on a lever these fingers compact the bundle in the trough, and one of the fingers, which is a species of binding arm, puts a wire around the bundle and carries it into a twister. While the fingers are held compressed on the bundle, the operator takes his other hand and moves a crank, which operates the twister, thus fastening a wire band around the sheaf. The operator then lets go of the lever and a weight throws the fingers back again, so as to receive a new charge from the rake, and takes hold of the bundle which has been bound and lifts it out of the trough, throwing it on the ground.

It will be seen, therefore, that this is a hand machine, the operator being obliged to dump the gavel into the trough, compress it, and put the wire around it; then to operate the twister to put in the twist; next to release his hand so that the fingers will recede from their position over the bundle, and, finally, to pick up the bundle and throw it out of the machine."

It will be seen that there is no binding apparatus here, in a mechanical combination with the harvester, any more than a basket hung upon an apple tree, to receive the apples, is in mechanical combination with the tree. The rake gathers the bundle, the bundle is thrown by hand into the binder, and then bound by hand. There is a suggestion that the finger which passes the wire around the bundle and the twister might be adjusted in different positions. But no hint that they are *simultaneously* adjustable like the binding arm and twister of the Gordon patent (fols. 1283, 1284).

The suggestion, in the patent, that the binding finger and twister may be made adjustable, is as follows:

"The twisting apparatus and its attachments may be made adjustable on the concave, for the

> purpose of bringing the apparatus to about the centre of the bundle, whether the straw be long or short. The wire cutter, of course, must be similarly adjustable, so as to act with the twisting and cutting contrivances."

After quoting this suggestion, Mr. Renwick describes a mode in which the twisting apparatus and the finger might be made adjustable (fol. 1283). He then says (fol. 1284):

> "This method of adjustment would not be worth much, in consequence of the length of time taken in making the adjustment, and there is not even a hint in this machine of Gordon's invention. In Gordon's machine there is a carriage, which so unites the binding arm and twisting apparatus that they are always in register with each other no matter what be their adjustment with relation to the cutting apparatus. Second, by moving the carriage in Gordon's, both the binder and the twister can be *simultaneously adjusted*, with reference to the cutting apparatus. In this patent for the invention of Sherwood, there is no means whatever—a carriage or anything else—which so unites the binding arm and the twister that they can be adjusted simultaneously, and always kept in proper register with each other, and therefore it is clear that this patent does not describe the invention set forth in the first claim of the Gordon 1868 patent."

It will be seen that this contrivance of Sherwood is one in which the operator placed the bundle in the binding "concave," and that the operator then put the wire around the bundle and revolved the twister, for the purpose of making the knot.

It is plain, therefore, that the problem presented to Gordon, of making the binding arm and twister simultaneously adjustable, in such manner that they would continue to be operated *by power derived from the drive-wheel of the machine*, was not even

considered by Sherwood, and, therefore, could not be solved.

The second patent to Sherwood of August 30, 1859 (Bk. of Exhibits, p. 146), also mentioned by the Court, was not referred to by defendants' expert, because it contains no suggestion that the binding finger and twister are adjustable. This patent had no means even for automatically removing the grain from the platform, but employed two men, a raker and a binder. This operation is described at page 148 of the Book of Exhibits as follows:

> "The raker sweeps the grain around between the shield F and the fence E, so that the centre or thereabout of the stalks shall lie over the strip G. When enough for a gavel has accumulated, the binder, from his seat, grasps the handle *r* and draws up the lever L, which draws the wire out from behind the ledges G H and passes it around the gavel, the strain on the wire being regulated by the clamp *s*, which will hold onto it or let it pay out, as the operator may desire, the position of the lever and the wire, when the gavel is about encircled, being shown in Fig. 2. The end of the lever is now brought down with the arms *t u*, in the position shown in Fig. 3, and the bundle is then tightly encircled by the wire, while the arms *t u* have pressed the portion of the wire between them into the groove of the twisting-wheel *d*, where an end of the same wire was previously placed. The operator, still holding on with his left hand to the lever, takes hold with his right hand of the crank *c* and gives it one turn or one revolution, which gives the cog-wheel *a* a revolution on its shaft, and one turn of the wheel *a* gives several turns to the twisting-wheel *d*, twisting the two portions of the wire tightly together and forming a tie."

This, like the former patent of Sherwood, was for a hand-binding machine, and there is no suggestion that the lever, which passes the wire around the gavel or the twister, is in any manner adjustable.

It will be seen that, in neither of these patents, is there an automatic twister, and there are no provisions in the harvesting machine for automatically delivering the grain to the binding apparatus.

The last patent cited by the Court below, as showing a state of the art which renders the first claim of the Gordon patent void, or void unless the rake is added to the combination, is that of S. S. Hurlbut (Book of Exhibits, p. 77).

This, to say the least, is a singular patent to cite for this purpose, inasmuch as the binding was neither done *by* the machine or *on* the machine. It contained simply a contrivance for gauging the size of the bundle. The grain was raked on to a platform, which was so arranged that when the bundle became of a sufficient size, the platform would drop and dump the bundle on the ground, where it was bound by hand.

It is thus referred to by Mr. Renwick (fol. 1288):

> "Q. 8. Do you find in said patent or model anything bearing a substantial resemblance to the combination mentioned in the first claim of the Gordon patent of 1868?
>
> A. No; I do not. The Hurlbut patent does not even show or describe a binding apparatus, much less an adjustable one. It is a machine for collecting gavels of grain and afterwards dumping them onto the ground where they are to be bound."

It is perfectly clear that this patent of Hurlbut does not describe any binding apparatus at all, adjustable or non adjustable, and that the bundles are not even bound upon the machine. Yet it is referred to, with the utmost gravity, by the Court below, as partially showing the state of the art which narrowed the construction of the first claim of Gordon's patent, so that the defendants' machines were not infringements.

I have now gone through the state of the art prior

to Gordon's patent of 1868, as presented by this record, and with special reference to the five patents cited by the Court, as either avoiding the first claim of said patent or narrowing it, so as to include the rake, in the combination of said claim.

Of these patents, Watson & Renwick's contains no adjustable binding apparatus, though the same result was sought, by making the delivering mechanism of the harvester adjustable with respect to the binder.

In the first Sherwood patent the grain was placed in the binder by hand, and the binding was also done by hand, and there was no automatic delivery of the grain by the reaping machine to the binder, and no means shown for making the binding finger and twister capable of adjustment.

In the second Sherwood patent the binding was also done by hand, and there is no suggestion of any adjustable mechanism.

In the Hurlbut patent there was no binding apparatus at all, and the invention consisted of a method of sizing or weighing the bundles, which were then dropped to the ground and bound by hand.

This reduces the entire state of the art, prior to the Gordon patent, so far as an *adjustable* binding apparatus is concerned, to the single suggestion in the Watson, Renwick & Watson patent, that instead of making the platform adjustable with reference to the binder, it "might be advantageous, in some cases," to make the binder adjustable with reference to the platform."

It is plain, therefore, that Gordon's invention was not *anticipated* by anything in the prior state of the art.

Has the decision of the Court below, that the proof as to the state of the art was sufficient to make the rake a part of the combination of the first claim, any better justification?

The ordinary meaning of such a statement would be that the Court found in the state of the art, prior to Gordon's patent, *a binding arm and twister capable of simultaneous adjustment, without the rake.* But, as we have seen, there is nothing of the kind described, illustrated or even suggested in the prior patents.

The patent of Watson, Renwick & Watson, which is the only one containing any suggestion as to an adjustable *automatic* binder, *contained a rake, which was intended by the patentees to perform substantially the same office as that of Gordon*, and it is difficult to see how that suggestion could make Gordon's rake an element of his first claim.

Again, the claim is for the binding arm and automatic twister, made capable of adjustment with reference to the length of the grain, and the rake is not only incapable of adjustment, *but is the very device relative to which the binding arm and twister are adjustable.* The result sought can only be produced by making the binding arm and twister adjustable with reference to the rake which delivers the grain.

It appears, therefore, to indicate a strange misconception of the entire situation, to say that the rake is one of the adjustable features of the Gordon patent, and is included in the combination of the first claim.

The Narrowing of the Patent by the Office Proceedings, as Disclosed in the File Wrapper and Contents.

The learned Circuit Court came to the conclusion that the Patent Office Examiner had insisted upon a narrower claim than that first presented by the patentee, and that the patentee acquiesced in such action; and that, in some inscrutable manner, this action of the Office also limits the claim to a combination which includes the rake.

Ordinarily, this language, on the part of the Court, would mean that Gordon had first claimed a combination which *did not include the rake*, and that the Examiner, finding in the prior state of the art, a combination of an adjustable binding arm and twister, without the rake, had rejected this claim, and that Gordon had then changed his claim, so as to include the rake in the combination.

But the file wrapper shows no such proceedings on the part of the Office, and the record shows that there was nothing in the state of the art which would have justified the Examiner in taking such a position.

The history of the case shows that upon Gordon's first application (Bk. of Exhibits, p. 344) his first claim was as follows:

> " Arm H constructed and arranged so as to be capable of a longitudinal movement jointly with frame W^2 carrying the twisting device, substantially as and for the purpose described."

This claim was not objected to by the Office, and would no doubt have passed the Examiner. But for other reasons, an entire new specification and claims were substituted in the place of those of the first application, and in that the first claim was as follows (Bk. of Exhibits, p. 355):

> " A binding device or mechanism, capable of adjustment in the direction of the length of the grain as the latter lies upon the platform of a harvester, in order that the gavel may be bound at or near the centre, substantially as set forth."

The Office did not reject this claim, and, as we have seen, there was nothing in the prior state of the art upon which it could have been rejected.

The Examiner, by a pencil note, *suggested* that it would be an improvement in the phraseology of the claim to name the different parts of the binding

mechanism, and substitute for the words "binding mechanism," "the binding arm H in combination with an automatic twister." And, accepting this suggestion, the patentee put the claim in its present shape.

Now, while it would admit of argument that if, prior to Gordon's invention, a binding mechanism, which did not consist of a binding arm and a twister, or its equivalent, had been made adjustable with reference to the grain delivering mechanism of the harvester, this change would have prevented Gordon from claiming such adjustable prior mechanism, no such argument is admissible in this case, because, in the first place, neither before or after Gordon has there been any practicable mode of operating an automatic binder except by the use of a curved finger, or arm, to place the band around the bundle, and a twister or knot tier to unite the ends of the band. Consequently the words "binding mechanism" at the time of Gordon's invention meant a mechanism which employed a binding arm and twister and could mean nothing else, and means the same thing to-day. It was, therefore, entirely immaterial whether the inventor claimed a binding mechanism or a combination of a binding arm and an automatic twister.

In the second place, so far as this case is concerned, it is quite immaterial whether those alterations did or did not narrow the patent, because there is no dispute that the defendants do employ a binding arm to put the band around the grain, and a knot tier, which, at the time of Gordon's invention, was a known equivalent for a twister to unite the ends of the band.

If, then, the amendment suggested by the Examiner did confine Gordon to the combination of a binding arm and an automatic twister, it has no bearing upon this case, because *it is conceded that the defendants use the elements of the narrow claim*,

and the amendment did not have the effect of placing the defendants' machines outside the scope of the patent.

It is, if possible, even more difficult to conceive how this amendment could have the slightest tendency to confine Gordon to a combination, in which the rake was one of the elements. Indeed, one would suppose that it would have precisely the opposite effect, because, while it might be possible that the general term "binding mechanism" would be broad enough to include the rake, the naming of the binding arm and twister, as specific elements in the claim, would seem sufficient to *exclude* it. This taken in connection with the fact already mentioned, that the rake is not adjustable with reference to the length of the grain, but is the mechanism *as to which* the binding arm and twister are capable of adjustment, would seem to prove, conclusively, that the amendment of the claim cannot have the effect ascribed to it by the Court below.

The Defense of Prior Public Use by Stephen D. Carpenter.

This defense was set up, as already stated, by a second amendment to the answer, and the chief effort of the defendants throughout the litigation was to establish this alleged anticipation. They claimed, and sought to prove, that Carpenter conceived of an adjustable binder in 1861 or 1862; that he produced a complete operative machine in 1863, of which a model was put in evidence entitled "Model of Carpenter's 1863 Machine;" that he pursued his investigations during 1864 and 1865, and about 1866 produced an adjustable binder combined with a "Marsh Harvester," which has already been defined as a harvester which elevated the grain over the drive-wheel, for the purpose of delivering it to the binder. In the course of this inves-

tigation it was proved beyond any chance of reasonable dispute that Mr. Carpenter and his witnesses had put back their dates about three years; that no attempt was made by Carpenter to construct an automatic binder until the summer and fall of 1866, and that he did not attach it to a Marsh harvester until some time in the year 1868, while Gordon's application for a patent was made December 27, 1867, and while he had filed a caveat describing this adjustable device June 27, 1864, and made a complete machine containing it the same summer.

I do not discuss the evidence showing these facts, because, in the first place, I do not believe that the defendants will claim that Gordon's harvester and binder was anticipated by anything that Carpenter had done; and, in the second place, for fear they might make such claim, a brief, as to the Carpenter anticipation, made by my friend and associate Mr. E. H. Bottum, who took all the testimony as to that branch of the case, will be submitted to the Court.

Moreover, the defendants have, by a stipulation (Bk. of Exhibits, p. 3) precluded themselves from taking the position that the public use by Carpenter (if it amounted to a public use) was prior to Gordon's invention. The stipulation is as follows:

> "For the purpose of relieving counsel from the discussion and the Court from consideration of certain testimony relative to the alleged prior use by Stephen D. Carpenter,
>
> It is hereby stipulated that counsel for the appellees in the argument of these causes will not insist that the evidence establishes as conclusively as is required in proof of anticipation that the Stephen D. Carpenter adjustable grain-binder referred to in the proofs, was completed as a practically operative machine prior to the 27th day of June, 1864, but this stipulation shall not preclude them from contending that such Carpenter grain-binder was built and used prior to the construction and use of the Gordon grain-binder, or from any other argument or conten-

tion relative to said Carpenter machine or invention not inconsistent with this stipulation."

The testimony of the defendants' witnesses showed, if it showed anything, that Carpenter had made a "practically operative machine" about the summer of 1863, and the admission, in this stipulation, that the same was not made prior to June 27, 1864, upsets all the dates given by Carpenter and his witnesses, and leaves unimpeached the testimony of the defendants, showing that the machine was not even begun until the summer of 1866.

Indeed, the prior use is not only *not* proved "beyond a reasonable doubt," but it is proved, beyond such doubt, that his use did not anticipate the Gordon invention.

On the said 27th day of June, 1864, Gordon filed a caveat (Bk. of Exhibits, p. 69). That caveat is absolute and positive proof that the adjustable feature of Gordon's grain-binder had been conceived and put in a practicable and operative shape prior to that date. The caveat contains the following description (p. 71):

> "The frame to which the twister is attached reaches round, in front and back, to the binder bar B, where it is provided with a stud each side of the bar, which is connected to the shaft *b* by a slot and feather, so that this frame may be set forward or back, according to the length of the grain being cut, and at the same time the binder arm B, and twister, are made to register to each other, whatever their adjustment may be."

This is a full and exact description of this adjustable feature, as described and illustrated in Gordon's patent of May 12, 1868. As to this description, Mr. Renwick (fol. 1262) testified as follows:

> "Q. 3. State whether or not, in your judgment, a mechanic skilled in the art of manufacturing harvesters and binders could construct

from the description and drawings of said caveat the devices by which the binder arm and twister are made adjustable with reference to the cutter bar.

"A. I have no doubt that he could construct the carriage which causes them to move together, and mount them upon it, so that it and the binder arm and twister could be adjustably set with reference to the cutting apparatus."

And this statement, by Mr. Renwick, is nowhere denied.

As the invention was complete and fully described in a caveat of June 27, 1864, it hardly seems to be important whether or not Carpenter's machine was produced before Gordon made a full sized grain-binder. But he states that the same summer that he filed the caveat, he produced a full sized machine, containing the adjustable features, as described in his caveat and in his subsequent patent, and in this statement he is corroborated by two witnesses, and there was no attempt, either by testimony or by cross-examination in any manner, to impeach or contradict his testimony.

The evidence shows conclusively that Mr. Gordon was continuously thinking of and working upon this adjustable binder during all the time that he could spare until he filed his application for a patent, and that he then took up the problem of attaching his adjustable binder to a Marsh harvester, which he finally did in 1871.

In view of these facts, the defense of *abandonment* which was hinted at in the defendants' argument in the Court below appears to be without foundation.

It is unnecessary to say more in regard to the alleged Carpenter anticipation, as to which the defendants were so decisively defeated.

THE DEFENSE THAT THE GORDON MACHINE WAS "IMPRACTICABLE."

This defense is not one of those enumerated in an Act of Congress. It is an implied defense arising from the requirement of the statute, that the invention or discovery patented shall be *useful*.

The evidence in this case that the machine described in the Gordon patent was, in fact, operative and useful is of a character that cannot be ignored or disregarded, and it is substantially uncontradicted. The defendants have introduced the evidence of biased experts for the most part connected with them in business, who do not pretend that they, or either of them, have made or even seen a machine made according to the Gordon patent of 1868, who give their opinion as to its practical use. The criticisms of these experts are, for the most part, directed against the durability or the capacity for continuous work of the patented machine. This machine, invented in 1863 and patented in 1868, at comparatively early periods in the history of the art is not, they say, equal in these respects to machines having the advantage of later improvements. I do not recollect that any witness for the defendants states that a machine, made according to the description of the Gordon patent, will not cut and bind grain, or that it will not do it continuously for a *considerable* length of time. If there is any such evidence it is fully disposed of by the complainants' witnesses. On the issue of utility, the mere opinion of all the experts in the world, founded upon an examination of the patent, without an actual test, amounts to nothing against the testimony of honest and truthful witnesses, who saw the machine in actual operation and swear that it worked satisfactorily.

The utility of the Gordon invention was alleged in the complaint and denied in their answer. The

counsel for the complainants, who took their first evidence, did not choose to rely on the *prima facie* evidence of the patent as to the utility of the invention, and introduced witnesses to prove how a machine, made under the patent of 1868, operated.

James F. Gordon testified that soon after applying for his patent of May 12, 1868, he came to Rochester and built a machine which was operated in the harvest field, in the vicinity of Rochester, in July and August, 1868 (fol. 1109).

This 1868 machine contained the invention described and claimed in the first claim of his patent of May 12, 1868 (fol. 1111).

John H. Gordon says that the machine made in 1868 was the one shown in the patent, and that but one machine was completed in 1868, until after the harvest of that year (fols. 1334 and 1338).

Four witnesses were produced by the complainant, in the first instance, who saw this machine of 1868 work in the field, in the harvest of that year. They all testified that its work was good.

James A. Maxwell watched the machine work for half a day; it cut the usual quantity cut by a machine in that time; it did very well; *it bound all the bundles;* the grain was wheat, very ripe and heavy (fol. 1236).

Daniel McPherson, himself an inventor and patentee of harvesters, was present at this trial from an hour and a half to two hours. The grain was very heavy, tangled and lodged. The machine was cutting all the time, except when stopped by the crowd, who wanted to look at it. It cut and bound well, and the witness saw no bundles which the machine failed to bind (fols. 1247, 1248).

Edward I. Kelsey saw this same trial, and said that the machine cut and bound "very nicely" (fol. 1253).

David Menzie saw two trials, one being the same spoken of by the other witnesses, and says that on

both occasions the machine did the work very well; that he had seen machines within the last five or six years that did not work as well. (This was June, 1885.) Did not see the machine miss any bundles (fols. 1254–1256).

At folio 1115, the complainants' counsel put in evidence a circular, signed by a large number of people who witnessed the trial of the 1868 machine on the Renwick farm in Caledonia, being the same spoken of by the witness Maxwell and others. The circular being hearsay was not legitimate evidence, and has not been printed in the record. But Mr. James F. Gordon, at folios 1148, 1149, states the substance of a certificate, which he says was signed by nearly 200 persons who saw the machine on the occasion of that trial. Probably the certificate itself is not evidence, but in one point of view it was valuable. It informed the defendants of the names of nearly 200 spectators of the trial, and if the evidence of the complainants' witnesses was not strictly true, if they had in anything "extenuated or *set down aught in malice*," here were scores of witnesses who could be called to contradict them. Not one of these witnesses was put on the stand by the defendants. Instead of doing so, the defendants called two witnesses from Michigan to testify as to the operation of a similar machine in the summer of 1869, at Three Rivers, in that State. The testimony of Mr. Caldwell, the first of these witnesses, was to the following effect:

That in 1869 he was one of the firm of Caldwell, Twitchell & Co., of Three Rivers; that the firm entered into a contract with James F. Gordon to make machines under the patent of May 12, 1868; that James F. Gordon sent a sample machine from Rochester, and they got several other machines "pretty well under way;" one of these machines (the witness did not remember whether it was the Rochester machine or one made at Three Rivers) was tried two or

three times on the farm of a Mr. Wolf, and did not work well; then it was tried on the farm of Mr. Arnold, and did not give satisfaction. An agreement was made with Mr. Arnold to allow a piece of his wheat to remain till the alterations could be made. The alterations were made under the directions of John H. Gordon, and the machine again tried on the Arnold farm. Mr. Caldwell does not deny that it cut and bound the piece of wheat reserved without difficulty, but he says that the firm "become satisfied that the machine as then constructed was not a practical harvesting machine to do practically the work designed" (fols. 1347–1354[b]).

The defendants also called Mr. Wolf, on whose farm the first trials were made, to corroborate Mr. Caldwell in regard to those trials, and he did so (fols. 1354[d]–1357).

The Court will notice that neither of these witnesses were asked *what the defect in this machine was.* There was no pretense that the machine would not bind the grain, or that the adjustable feature of the binder was not perfect. For aught that appeared, the difficulty might have been in the cutter, the rake, or for that matter the drive-wheel. But the complainants called John H. Gordon to show precisely what the trouble was. His testimony, on this point, begins at page 733 of the Record. His statement is, in substance: That the machine tried on the Arnold farm, at Three Rivers, was made at that place, according to the description in the 1868 patent to James F. Gordon; that he was not present at the trials on the Wolf farm; that he was present at the first trial on the Arnold farm, and found that *the reel of the machine was set too far ahead to reel the grain properly;* the machine was taken to the shop and this defect remedied; that they then cut the piece reserved by Arnold for trial; that the piece was two or three acres, perhaps not over an acre and a half; that the machine cut and bound

the whole of it, and did it well; missed no bundles, except on account of the breaking of the wire, which was of iron, and not so strong as the steel wire after yards used; that the only trouble with the operation of the machine was that the crop was over ripe and "puffy," and a great deal of it tangled, and the machine would not readily discharge the bundle when the grain was tangled, though, when it stood straight, there was no difficulty. He further testifies that he took the same machine to Kalamazoo, and cut a piece of grain there; that it stood up better than the piece at Three Rivers, but was partly tangled; that when it was tangled the machine had to be aided to discharge the bundles, but when it stood up there was no difficulty in the discharge; that the piece of grain cut at Kalamazoo was from two or four acres; that the machine cut and bound it all well, and missed no bundles, except a few, caused by the breaking of the wire. He explains what Mr. Caldwell calls the "abandonment" of the 1868 machine, by saying that he saw a Marsh harvester in the summer of 1869, that is, a harvester which elevated the grain over the drive-wheel, and concluded that it would be a better machine to attach his binder to, on account of freer discharge, as there was plenty of room for the bundle to fall from the binder, which was not the case in the 1868 machine; that he told Caldwell, Twitchell & Co. of the change, and promised to send them a machine when he and his brother got one done, but, before that time arrived, the firm went out of the machine business.

At this trial of the 1868 machine, at Kalamazoo, it was driven by John H. Morris, who had been engaged in the harvester business since 1855 and 1856, and who has been agent for several harvester manufacturers. Fortunately, we were able to find Mr. Morris and obtain his evidence. His statement, beginning at page 728 of the record, is to the following

effect: That he was present at the trial at Kalamazoo and drove the team; that the crop was part light and part heavy, very ripe, and some of it crinkled; that part of the field was a side hill and steep; that it was necessary to adjust the binder when he passed from short to tall grain, or going up or down hill; that he did adjust it when it became necessary; that they had no trouble with the binder; that it did not miss putting the band around any bundle, but a few bundles came apart on account of broken wire; that, so far as the binding was concerned, the binder would compare *very favorably* with more recent machines; that they were at work from ten o'clock to three or four o'clock, and cut and bound two or three acres of grain, and might have cut more if they had wished; that the machine worked just as well when they stopped as when they began; that where the grain was about the right height it discharged the bundles pretty well; where it was tall or crinkled down, the bundle would get fast in front of the arch and Mr Gordon would put it out. That it is nothing uncommon for binders to require help in discharging the bundle, even in improved modern binders, is proved by Mr. Morris (fol. 1330), by Mr. Parsons, the patent attorney and expert of the Walter A. Wood Mowing and Reaping Machine Company, of Hoosick Falls, New York (fol. 1298), and Lewis Miller, of the great firm of Aultman, Miller & Co., of Akron, Ohio (fol. 1064). It was also claimed by the defendants' experts that it was impracticable to bind grain with nothing but the binding wire to compress the bundles. This is answered by Messrs. Parsons and Miller, with the plain statement that it has been done successfully and extensively (fols. 1298 and 1063). Mr. Miller says that his firms, C. Aultman & Co. and Aultman, Miller & Co. made at least 4,000 of such machines, which did successful work.

The degree or kind of inutility necessary to avoid

a patent has been a frequent subject of discussion by the courts. Some of the principles decided are as follows:

> "To be patentable, inventions need not be superior to or better than all other things known before; it is sufficient if they are useful in themselves. Certainly, then, they need not be better than *subsequent devices*."
>
> Shaw *v.* Colwell Lead Co., 20 Blatch., 417.
>
> Manufacturing Co. *v.* Du Brul, 2 Barn. & A., 618.

> "The requirement of the statute as to utility is satisfied if the invention is capable of being used for the purpose for which it was designed, and that purpose is at all beneficial."
>
> Macoy *v.* Jaggin, 1 Blatchf., 372.
>
> Wilbur *v* Beecher, 2 Blatchf., 132.

> "Nor is it necessary that the machine should perform, successfully, *every* function for which it is intended. The defense of non-utility requires evidence that the patented invention will not perform *any* function which is ascribed to it in the Letters Patent."
>
> Rowe *v.* Blanchard, 18 Wis., 462.

> "In such cases the evidence must show a total incapacity in the invention to do anything claimed for it, because neither *imperfect operation*, nor a total failure to perform *part* of the claimed functions, will sustain a defense of want of utility.
>
> Seymour *v.* Marsh, 6 Fish., 115.

Under the rules above laid down, it may be conceded that the first claim of the Gordon patent of 1868 would be void for want of utility, if it were shown that it was impossible to adjust the binding apparatus by the means described in the patent. As the object of the adjustment is to cause the binder-

arm, twister and other appliances, to work together, in the various positions in which they are placed, I think that the first claim would also be void, if it were shown that the apparatus would not successfully bind the grain, would not put the band around the gavel, and unite the ends of the band. But if the machine would *adjust, and bind when adjusted*, it is of no consequence, so far as the first claim is concerned, what other parts of the harvester were defective. It would perform all the functions claimed in the first claim, and that is an answer to the defense of non-utility.

Now, the uncontradicted evidence is that, so far as the binding and adjusting are concerned, the Borden 1868 machine was a complete success. It would work as well as any of the wire binders that were afterwards produced. The difficulty was, that the binder was too close to the ground, and the space for the escape of the bundle was too small, so that, in certain kinds of grain, the machine had to be assisted to discharge the bundle. That is, a convenient, but not indispensable, function (for an *automatic* discharge was by no means essential to the operation covered by the first claim of the patent) was "imperfectly performed" when cutting certain kinds of grain. It can hardly be claimed that, if Gordon had stated in his specification that after the bundle was bound it was removed by an attendant, such a statement would have made the first claim of the patent invalid. It is quite true that such a machine could not have competed with subsequent binders provided with automatic devices to discharge the bundle, but commercial success is not the test of utility in the sense of the patent law. The only question is, will that part of the machine which the infringer has appropriated operate as described and designed by the patentee? If it will, there is utility enough to sustain the patent.

Again, there is no contradiction of the fact that Gordon's machine would discharge the bundle well enough where the grain stood up straight and was not lodged or tangled. Surely it cannot be said that a machine that would operate successfully and well even in straight grain had *no* utility. To be useful, a machine need not operate well under all possible circumstances.

In *Railway Co.* v. *Sayles* (97 U. S., 560), the Supreme Court of the United States, in examining the validity of a patent for the Tanner car brake, considered a prior device, known as the "Springfield brake." The Court said of this brake:

> "It was undoubtedly attended with some inconveniences in its operation, especially in going around sharp curves, but this did not prevent it from being used, and on a straight track or on a track having only slight curves, it operated very satisfactorily."

And, again:

> "It is useless to argue that this brake was *an imperfect one*, or that it worked *far less satisfactorily* than the Tanner or other brakes. *It did work*, and, *under favorable circumstances*, worked as well as the most approved form of brakes."

So, in this case, "it is useless to say" that the Gordon machine was imperfect, or that it discharged the bundle far less satisfactorily than the modern binders, to which the grain is raised over the drive-wheel of the harvester. "It did work" and bound grain as well, and, "under favorable circumstances," discharged the bundle as well as the most approved wire-binding machines.

The defense of non-utility is not only *unproved*, but it is flatly and conclusively *disproved*.

It is asserted by the defendants that the original plaintiff, James F. Gordon, made machines in which

this precise form of device for the adjustment of the binding apparatus was not used. That fact, if it is a fact, can have no effect upon the validity of the patent. It is no answer to a patent to say that the inventor, after obtaining it, tried to improve upon it and find something more advantageous.

James F. Gordon made experimental machines in 1871, 1872 and 1873, which were never put upon the market, in which the binding arm and twister were adjusted separately. He licensed McCormick & Co., in Chicago, in October, 1874, and sent him a pattern machine December, 1874, or January, 1875 (fol. 1129). This pattern machine contained an arrange ment in which the binder arm was movable on its shaft and the other binding appliances on a frame, simultaneously, as in the 1868 machine (fols. 1142 and 1168).

THE DEFENSE THAT THE GORDON MACHINE WAS A "COMBINED HARVESTER AND BINDER," WHILE THE MACHINES OF THE DEFENDANTS ARE INDEPENDENT HARVESTERS COMBINED WITH INDEPENDENT BINDERS.

This, of course, is part of the defense of non-infringement, but so much weight is laid upon it in the defendants' testimony, in the arguments of their counsel and in the decision of the Court, that it is proper to discuss it separately from the other questions of infringement.

It is said that the adjustable features of the defendants' machines are not the same as those shown in the Gordon patent of 1868, because in Gordon's machine the binding apparatus is inseparably combined with the harvester, while in the defendants' machines the binding apparatus is upon a separate frame and detachable. This statement is not quite accurate, and if it were accurate would be entirely immaterial. The truth of the matter is that the dif-

ferences between the Gordon construction and the construction of the defendants were simply the obvious changes that were made necessary by the application of the Gordon invention to a machine which delivered the grain to the binder over the drive wheel. In the Gordon construction the binder received the grain directly from the platform by means of a rake. This necessitated placing the binding apparatus between the end of the platform and the drive wheel. It was, therefore, necessary that the binding arm and twister carriage should be indirectly supported by the sides of the harvester frame; meaning, by *sides*, the front and rear. When it was thought best to attach the Marsh style of harvester, which elevated the grain over the drive wheel, it was no longer possible to support the binding apparatus in this way and it was placed in a frame which was supported by the drive wheel end of the harvester frame. But the harvester and binder are not "independent" in one case more than the other.

Mr. Gordon says upon this point (fol. 1140):

> "If you remove instead of the frame W the box or hanger F, and uncouple the putnam *f*, and take out the two screws or bolts in the box *d*, the whole binding mechanism proper can be lifted out of the machine, the binding arm and twister still maintaining their proper relation on the binding frame. I would also add that the binder proper can be as readily and easily removed from the harvester as in the defendants' machine and still remain an organized binder proper."

And he might have added that the harvester would remain an organized harvester proper with the binding apparatus removed.

It is quite clear that Mr. Gordon is right upon this point. It is true that to operate the binder away from the harvester one would be obliged to

find some other means of actuating the binder arm and twister. But it is equally true that to operate the *defendants'* binder alone, one would be obliged to find some means, other than the drive wheel of the harvester, to actuate the shaft that moves the binding apparatus. But, as I have said, the point, if true, is utterly immaterial. If, in the defendants' binder the binding arm and knot tier are, when *attached to the harvester*, adjusted in substantially the same manner as the binder and twister of the Gordon machine, what possible difference does it make that the defendants' binder is detachable?

Gordon's claim is for a binding arm and twister, capable of adjustment, with reference to the grain-delivering mechanism of the harvester, and if in the defendant's machine the same elements of the binding apparatus are there made adjustable to the grain-delivering mechanism of the harvester, what possible argument can be drawn from the fact that they can be removed from the machine, taken out of the combination and used separately? The defendants can bind all the grain they please with binders detached from the harvester, and they will be subject to no molestation from these complainants. We say that *when attached to the harvester* the defendants' binder adjusts in the same way as in the Gordon patent, and the fact that it is capable of being detached is of no possible consequence on the question of infringement. If the defendants' binder were placed on ways in the main machine in such a manner that it could not be removed without taking the main machine to pieces, is there any doubt that it would operate as it does now, that it would adjust as it does now, that the entire combination would be the same?

This vague and nebulous theory, urged by the counsel for the defendants, and apparently adopted

by the Court, has no real merit, and is, in reality, a mere play upon words.

After the defendants had once closed their case, they opened it, principally, for the purpose of examining Mr. Quimby as an expert, for the purpose of elaborating this theory. Mr. Quimby was probably not the father of the theory, but he was its expounder, and if he could not give a satisfactory account of the defendants' position, nobody can.

He was called, principally, for the purpose of explaining the wide and impassable difference between a *combined* harvester and binder, and a harvester and binder *in combination*.

Upon cross examination, the plaintiffs' counsel endeavored, as far as possible, to get some clear and comprehensible idea of the exact theory urged by the defendants, with the following not very successful result. I quote from Mr. Quimby's cross-examination, beginning at folio 1415:

> "Q. 21. Do you consider that there is a clearly defined generic distinction between the two types or classes of machines into which you have separated them in your description?
>
> A. Yes.
>
> Q. 22. And that distinction, as you apprehend it, consists in what, defining it as precisely and completely as you are able?

After some argument and explanation, he answered as follows:

> A. "And therefore the defendants' binding machine can be removed bodily from the harvesting machine and be operated by power derived from some other source and upon grain supplied to it from some other source; and, further, that when the defendants' binding machine has been so removed from the harvesting machine, the harvesting machine will remain a complete operative machine, which can be employed to cut grain and elevate the cut grain

> and discharge it upon the ground upon the stubble side of the machine or dispose of it in some other way, the distinguishing difference between the two machines being that the complainants' binding and harvesting mechanisms *cannot* and the defendants' *can* be separated from and operated independently of each other."

This, then, was, in the opinion of the learned expert, the real point of difference between the two machines. It is just as true of the complainants' machine as it is of the defendants', that the entrie binding apparatus can be removed and the machine will be a complete harvester, and will work just as well without that apparatus as with it.

In the second place, while you cannot operate the complainants' binding apparatus when removed from the harvester without making a frame to support it, that fact is hardly material to any question in this case. Nobody *wants* to operate the binder independently. Nobody in actual practice ever *does* operate the binder independently, and, what the fact that it can be operated independently, has to do with its operation *when attached to the harvester*, is an insoluble mystery.

But let us see what the advantage of this "separability" is, and what bearing it has upon the *adjustable features of the binder*. I quote from Mr. Quimby's testimony:

> "Q. 23. Is there any mechanical or useful purpose or object subserved from the separability of the two machines, in which, as I understand you, the generic distinction between the two types or class inheres.
>
> A. So far as my observation has extended the type of machine employed by the defendants is that which has proved the most valuable in practical use. In a mechanical point of view, I conceive it to be an advantage to have the various appurtenances of the binder compactly arranged in fixed relations to each other, in a

> frame, separate and distinct from the harvester frame, and where convenient access can be had to all of them, for the purpose of setting them up originally, and keeping them in repair, in practical use."

The advantage, then, of its "separability," has nothing whatever to do with the adjustable feature of the machine, but consists in the greater facility of originally setting up the machines, and in keeping them in repair.

Again, at folio 1422, the same witness says:

> "It is, of course, a fact that a binding machine of the character employed by the defendants is rendered *more easily and perfectly capable* of adjustable attachment to a harvester, if it be so constructed as to be separable from the harvester."

The fact that it is more easily and perfectly adjusted is hardly sufficient to take the defendants' binder out of the scope of the Gordon patent. It is a mere question of *degree*.

Again, at folio 1427, the witness was asked this question:

> "Q. 43. Are you acquainted with the English patent for harvester and binder of Samuelson and Manwaring or with the English patent of Harrison for a similar machine, or with what is known as the Watrous machine, now manufactured by the Walter A. Wood Company?
>
> A. I am not familiar with them.
>
> Q. 44. In these machines the grain is elevated by means of pins projecting through inclined slats or bars, and these pins not only carry the grain into the binder, but force it against the binding cord and the trip-lever, ceasing to operate as soon as the binding machine is set in motion; the machine contains no other packers, but the binding arm, knotter, compressor and discharging arms are *removable*, and also adjustable with reference to the elevator; does this machine belong to either of the types

mentioned in your direct-examination, and to which?"

After stating his understanding of the question, Mr. Quimby answered:

> "As I understand the conditions of the question, they define a machine *which belongs rather to the type of the Gordon machine than to the type of defendants' machine*, but in giving this answer I am merely giving the impression created in my mind by the terms of the question, and it is possible that upon seeing the machine referred to in the question my answer might be modified."

As is plainly stated in the question, the only difference between the machines named and those of the defendants, is that they dispense with the packers, and the grain elevator is so constructed that it forces the grain against the binding wire and the trip lever, which sets in motion the binding machinery. The binding machinery is all placed upon a detachable and adjustable frame, as in the defendants' machines. Thus, we learn from the examination of Mr. Quimby:

FIRST.—That the difference between the two types of machines is, that, in the defendants' machine, the binder can be operated when separated from the harvester.

SECOND.—That the advantage of this separation is, first, that it is easier to set up the machine, and to repair the binder; and second, that it is more easily and perfectly adjustable.

THIRD.—That the difference between the type of machines does *not* depend upon the "separability" of the binder, but upon the question whether the cut grain is forced against the binding cord, and

trip-lever, by packers, or whether the elevator is so constructed as to do that office itself.

If any one can, from this evidence, obtain any clear and distinct idea of Mr. Quimby's theory, he is more fortunate than I have been. It seems to me to be *simply* a theory, resting upon no basis of fact whatever.

As I have already stated, Gordon's patent is for the use of a sliding frame, which moves the binding arm and the twister and its accessories in unison, and is so constructed with reference to the device by which the harvester delivers the grain to the binder that the band would be passed around the grain as nearly as possible in the centre of the bundle. If a machine does this by similar means, when attached to and supported by the harvester, it would seem to be of very little consequence what is its operation when *separated* from the latter machine.

We submit, therefore, that whether the complainants' harvester and binder and the machines of the defendants are or are not different types of machines, they use substantially the same means for adjusting the binding apparatus to the length of the grain to be bound, and that the theory so strongly urged by the defendants, if true, is utterly immaterial.

THE DEFENSE OF NON-INFRINGEMENT, OR THAT THE DEFENDANTS DO NOT PRODUCE THE SAME RESULT IN SUBSTANTIALLY THE SAME WAY AS THAT DESCRIBED AND CLAIMED IN THE PATENT.

According to my recollection, there was no point made below, and none will probably be made here, that the knot tier of the defendants' machines is not, so far as this patent is concerned, an exact equivalent for the "automatic twister" of Gordon's patent.

It is shown by the evidence of Mr. Renwick (fol. 1183), that there were various patents prior to the date of the Gordon patent of 1868, which described machines in which the ends of a wire band were united by means of a twister, and also machines in which the ends of a cord were united by means of a knot tier; he says:

> "By these patents I am instructed that cord and wire were known substitutes for each other for making bands, and that cord-tying and wire twisting devices were also known substitutes for each other, all prior to the date of the Gordon patent of 1868."

It is so obvious that any device, known prior to Gordon's patent, which unites the ends of the band put around the bundle by the binding arm, is *in this combination* an equivalent for the twister, that argument to establish the proposition is hardly necessary.

It cannot be denied that the defendants' machine has a binding arm that is "capable of adjustment in the direction of the length of the grain," nor that it is combined with an automatic twisting or tying device, in such a manner that the binding arm and tier can be moved simultaneously, and will continue to engage and operate with each other in whatever position they are placed.

It cannot be denied that they are capable of adjustment within the meaning of the first claim of the Gordon patent, and are so constructed that by various simple mechanisms, requiring no invention, they can be instantaneously moved and placed in position by the driver without dismounting from his seat or stopping the machine.

Plainly, the result and its advantages are the result and advantages of the Gordon invention, and the only question that can be raised is whether the *means* for producing the adjustment in the defend-

ants' machine are the same, or substantially the same, as in the Gordon patent.

In the Gordon patent, the shaft, which actuates the binding arm, is sustained in bearings, attached to the main frame of the machine, the binder arm is so arranged that it can be moved along this shaft. The other binding appliances, the twister that makes the knot, the knife that cuts the wire, and the grippers that hold the end of the wire after it is cut, are all mounted on a carriage, which slides on "ways" placed between the binder arm and the platform. The binder arm and the carriage, on which the twister is mounted, are forced to move, simultaneously, by the "frame W," which is an angular piece of iron, one leg of which is fastened to the front end of the twister carriage; this leg extending to and under the binder-arm shaft, while the other leg extends longitudinally under the shaft and is movably fitted to it by lugs, loosely inclosing said shaft, on each side of the bearings of the binder arm. When the binder arm is moved along the shaft to a new position, the twister carriage necessarily moves with it, and the twister will, therefore, always preserve its position relative to the binder arm.

In the defendants' machine, the binding arm, as well as the knot tier, is mounted on a frame which moves to and fro in the direction of the grain, and, *because* they are mounted on the same frame, they always maintain their position relative to each other.

In the Gordon machine, the twisting mechanism is under a stationary platform, with an aperture above the twister through which the end of the binder arm carries the wire.

In the defendants' machine, the grain is received on a platform called the "binder deck," which is supported by the binder frame, and moves with the binding apparatus.

There are three differences, and only three, between the patent and the defendants' machines, and I submit that they are all mere colorable variations, or obvious changes, rendered necessary by the altered form of the harvester and its delivery mechanism.

First.—In the machine of the patent the binding arm and the twister and the movable frame upon and by which they are adjusted, are between the end of the platform and the drive wheel.

In the defendants' machines the binding apparatus is upon the outer side of the drive wheel.

Second.—In the machine of the patent the grain-delivering mechanism is a rake which passes over the platform.

In the defendants' machine the grain is conveyed to an elevator, which raises it over the drive wheel, for delivery to the binder.

Third.—In the machine of the patent the binding arm is caused, by the sliding frame, to move to and fro in the direction of the grain along its actuating shaft, while in the defendants' machines the shaft which actuates the binding arm is supported upon the sliding frame and moves with it.

The defendants have, then, a binding arm which performs precisely the same office as the binding arm of the patent—putting the wire around the bundle. It contains an automatic knot tier, which performs precisely the same office as the automatic twister of the patent, in uniting the ends of the band, and these devices are made adjustable by means of a sliding frame, with reference to the mechanism that delivers the grain to the binder.

It is true that the defendants' machine did not employ Gordon's rake. But, in the first place, the rake is, in no just sense, a part of the combination claimed, and I have already shown that the argu-

ment by which the Court below came to that conclusion is entirely fallacious.

The claim is for a binder and twister, capable of adjustment with reference to the grain, when supplied to the binder; and it is entirely immaterial by what means, or by what particular machinery, the grain is so delivered. Besides, if it could be argued that the rake was part of the Gordon combination, then the elevating and packing mechanism of the defendants' machines is an exact equivalent for the rake. The office performed by the rake, in the Gordon patent, is to deliver the grain to the binder, preserving its horizontal position as it falls upon the platform. This is the precise object of the elevator in the defendants' machine. It is done in one case by a rake; it is done in the other by a combination of inclined aprons and rollers and reciprocating packers. But all these perform the precise office of Gordons' rake—nothing more or less. That is to say, they preserve the horizontal position of the grain, as it lies on the platform, heads all one way, and deliver it, in this position, to the binding apparatus.

It would seem too clear to need argument, that, if the grain is presented to the binding devicess in its horizontal position, and the binding devices are capable of adjustment, so as to place the band in the middle of the bundle, whether the grain be long or short, the *means* by which the delivery is made to the binder must be absolutely immaterial. The adjustable feature, in any case, works in precisely the same way, and produces precisely the same effect. The claim is not for a novel method of *binding grain*, but for making well-known binding devices *adjustable* for a particular purpose.

Nor is the fact that in the machine of the patent the binding arm moves along its supporting shaft, while in the defendants' machine the shaft moves *with the binding arm*, of any greater materiality. If the shaft supporting the binding arm

were constructed so as to have a horizontal motion in its bearing, and the studs of the "frame W" were rigidly attached to it, so that on moving the carriage the twister and the binding-arm *shaft* would be moved with it, there could be no reasonable doubt that the means of adjustment of the binder and twister would be almost exactly the same as in the defendants' machine. The Gordon machine would then have a binder arm and twister mounted upon a three side sliding frame, of which the twister carriage would be one side, the binder-arm shaft a second side, and the front leg of the frame W the third side, and the necessary adjustment of the binding arm and twister would be effected, in exactly the same way, in both machines. There is no material difference between sliding an arm on a stationary shaft, and making the arm stationary on the shaft, and sliding the latter in its bearings, nor does such a change involve invention. They have been equivalent modes of operation from a time "to which the memory of man runneth not to the contrary." To make the binder shaft movable, in the Gordon construction, would be what the Supreme Court has declared to be "a mere interchange of form, within the skill of an ordinary mechanic?"

Consolidated Valve Co. *v.* Crosby Valve Co., 113 U. S., 178.

In fact, the learned expert of the defendants, Mr. Quimby, who cannot be suspected of any prejudice in favor of the complainants, admitted (with considerable reluctance, it is true), that a binding arm, on a *sliding* rock-shaft, would be the same thing as a binding arm *sliding* on a rock-shaft, within the first claim of the Gordon patent (fol. 1434).

If, for any reason, it was desirable to slide the shaft in its bearings, the hangers or bearings F and F2 (Fig. 1. of the Gordon drawings) could be made

to slide a few inches towards, and form the front of the machine, carrying the shaft G with them, and would move in unison with the twister carriage. The operation then would be, not only substantially, but precisely the same as in the defendants' machine, for then the binder arm and shaft, as well as the twister, would be mounted on a sliding frame, nor would such a change involve invention.

The real reason why the binder of the defendants appears to the eye to be widely different from that of the Gordon patent, is that subsequent invention has added a host of appliances to the simple binding arm, twister, clamp and knife, which form the binding apparatus of Gordon (fol. 1420).

When the means "for sizing the bundle," or making it, when it was of sufficient size, trip the lever which sets in motion the binding apparatus were introduced, a number of new appliances were added to the machine, and when, in addition to the binding arm and the twister, with its accessories, was added the packers, the inclined binder deck, the device for automatically tripping into operation the cord arm and knot tier, and the device for discharging the bound bundle, it became impossible to use the comparatively small frame upon which Gordon had mounted the twister. It was necessary to make a sliding frame, capable of carrying all these appliances, but it was not necessary to depart, nor did the manufacturers depart from the principle of Gordon's invention.

Take away from the defendants' binder all that modern ingenuity has added since Gordon's invention, to wit, the reciprocating packers, the automatic trip lever with its rock shaft and arms for actuating the trip, the devices for ejecting the bundle and permitting its discharge, and there remains the binder-arm and its shaft, the knot tier and its adjuncts with its shaft, both shafts resting in bearings attached by means of the

binder-frame to the main machine, and the bearings, with the shafts, capable of a to-and-fro movement, to lay the band in the centre of the grain. It is exactly the Gordon construction, except that the defendants in place of the *binder-arm sliding on the shaft*, have substituted a *sliding shaft, being a* plain mechanical equivalent, and a "mere interchange of parts, within the skill of an ordinary mechanic."

I do not think the learned Court below would have denied this position, if they had not felt obliged to narrow the construction of the Gordon patent, and deny the complainants the aid of the doctrine of equivalents. In this they fell into a grave error, and one that was especially damaging to the complainants in this case.

I have carefully gone through the state of the art prior to the Gordon patent, as well as prior to the Gordon invention, and I do not hesitate to say that a more original patent was never granted by the United States or any other Government, and, according to the liberal rule always adopted by this Court, whenever they are convinced that an important and material improvement has been made in the art to which the patent relates, the complainants were entitled not only to a fair, but to a very *liberal* construction of their patent.

So far as the evidence in this case shows, there never was found in this grain growing and grain cutting world a single man who ever conceived or dreamed of the actual invention which Gordon produced prior to such production. That in binding grain it was *desirable* to lay the band in the centre of the bundle was obvious to anybody, and it was not at all difficult to see that one way to do that (though as the evidence shows, not considered by inventors the preferable way), was to make the binding apparatus adjustable, with reference to the mechanism from which it received the grain. And when the defendants say that Gordon's construction did not involve invention, they

only mean to say that any mechanic, skilled or otherwise, would see, not *how to make* the binding devices adjustable, but that it was *desirable* to make them so. Though there are hints to be found, in the prior state of the art, that such a thing would be desirable, there is no proof that any one, prior to Gordon, even thought of mounting the binder and twister upon or in connection with a movable frame, which should slide to and fro in the direction of the grain, as it was delivered by the harvester, and move them simultaneously, so as to continually register with each other. That was Gordon's invention, and that is what the defendants have done, in violation of his rights.

I cannot help thinking that the learned Circuit Court, in narrowing Gordon's claim, by reference to a state of the art which contained nothing resembling it, and to proceedings in the Patent Office which had no legitimate effect whatever upon the construction of the claim, and by denying him the aid of the doctrine of equivalents failed to award him that degree of fairness and justice to which his ingenuity, his industry, and above all his *originality*, entitled him. He was the first to conceive of this invention, the first to reduce it to practice, the first to file a caveat, the first to make a full sized machine containing it, the first to apply for a patent, and the first to obtain it. And there was absolutely nothing in the art, prior to his invention, from which he could receive the least instruction, or the slightest aid.

Defined, as I have defined the invention, and as the Court will doubtless define it, it was absolutely novel and original with the patentee. Whoever, in a harvester and binder, connects the device that places the band around the bundle with the device which unites the ends of the bands, by means of a sliding frame, so that they may move simultaneously with reference to the mechanism, which delivers the

grain to the binder, by a mere motion of the hand of the driver, without dismounting from his seat or stopping the machine, infringes this patent. He uses the product of James F. Gordon's brain, he avails himself of James F. Gordon's ingenuity and industry, he profits by James F. Gordon's inventive genius, and it is right that he should pay to James F. Gordon's widow and assignees a reasonable compensation for the advantage which he has derived from this invention.

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Of Counsel for Appellants.

Office Supreme Court U. S.
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JAMES H. MCKENNEY,
CLERK.

Supreme Court of the United States.

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Brief Memorandum in Reply to Appellee's Brief.

BRIEF MEMORANDUM IN REPLY TO APPELLEES' BRIEF.

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Brief Memorandum in Reply to Appellee's Brief.

I.

An examination of the prior patents referred to in defendants' brief will confirm the proposition of Mr. Cowen's

main printed argument for complainants, that *no adjustable binding mechanism of any kind* was known in the art prior to Gordon's invention.

Cutter platforms, rakes, and travelling aprons had been adjusted for a like purpose, but no one used them, and such efforts only show the *existence of the problem solved by Gordon, and that his way of solving it (no other is practicable) was not "obvious" but the result of invention.*

The *Hurlbut, Heath, Watson & Renwick, Childs, Sherwood* 1858 *and Sherwood* 1859 patents are sufficiently considered in Mr. Cowen's argument, pp. 20–39.

It is obvious that the following are absolutely immaterial to the issues of this case, viz., *McPhetidge, Childs, Goodyear, Osborne, Reynolds.* They are not at all relied on by defendants' experts. Gordon antedates *Carpenter*, as shown by the separate brief on that point. The Barta patent shows merely an adjustable rake and delivering table, and has no suggestion of *adjustable* binding apparatus of any kind. The binding mechanism is stationary (Renwick, p. 707, q. 28).

The *Watson, Renwick & Watson* patent is fully discussed by Mr. Cowen (p. 22, *et seq.*) Its binding mechanism is integral with the frame of the machine carrying the main wheel, the mechanism for operating the cutter, rake, and all the other moving parts of the machine. The binding mechanism is incapable of adjustment except by *a reconstruction of the machine*, and the patent gives no hint as to how such reconstruction could be effected. That it was *this* kind of an adjustment, involving a reconstruction of the machine from time to time, and not Gordon's kind of an adjustment, involving continuous control of the position of the binding mechanism with relation to the cutter, rake, and grain platform of the machine, which was referred to by Watson, Renwick and Watson in the passage

of their specification so often quoted by defendants, is clear from the fact that it is *this precise kind of adjustment and no other* which is to be given to the cutter bar and platform of the patented machine (the only adjustment described) according to the patent, namely, *a reconstruction of them*. (See Mr. Cowen's argument, p. 23.)

Moreover, there are not in the Watson, Renwick and Watson patent "a grain binder and harvester made in separate sections" as defendants suggest, nor are any such described. The two "sections" referred to in the patent are (a) "one which sustains the binding apparatus AND the mechanical devices by means of which motion is imparted to the cutting, raking, and binding apparatus from the driving wheel, *which is also attached to this portion of the frame*," and (b) "the platform on which the cut grain falls." *The binding apparatus is an integral part of the machine.* (See Renwick, p. 694, Int. 11; p. 697, Int. 13).

Incidentally we call attention to a well-known principle of law as stated in *Topliff* v. *Topliff* (145 U. S. 156, 151): "It is not sufficient to constitute an anticipation that the device relied upon might, *by modification*, be made to accomplish the function performed by the patent in question, if it were not designed by its maker, nor adapted, nor actually used, for the performance of such function."

See also the Barbed Wire Case, p. 143 U. S. 275, 283.

Loom Company *v.* Higgin, 105 U. S. 580, 591.

II.

When these prior patents, and particularly that to Watson, Renwick and Watson, are correctly understood, the whole superstructure of defendants' argument falls to the ground. The defendants read in the prior art two

"classes" of binding mechanism: one where the binding mechanism constituted an organization by itself attached to but independent of the remainder of the harvester; the other where the elements of the binding mechanism had no such suborganization but were organized as an integral part of the harvester. They contend that Watson, Renwick and Watson is of the former "class," which is clearly not the fact, and that Gordon's improvement related solely to the second "class," a proposition which is equally without foundation.

In fact there were not and never have been any such "classes." The automatic binding apparatus has always been an integral part of the machine, operated by the same power mechanism which operated the cutter, rake, and other contrivances or working tools, and forming with the other operative parts of the structure an *organized machine*, all of the parts of which, including the binder, co-operated to secure the results desired.

It makes no difference in fact or in law whether the elements of a special organization in a machine, intended for a special individual function in the general organization, are themselves mounted on one support or are separately mounted, *provided* they co-operate with each other and with the other elements of the machine to produce the desired result. The function, mode of operation, and operative relation to the rest of the machine being the same in each case, such alternative constructions are the same in view of the law. It is obvious that Gordon might easily have mounted his binding apparatus on a separate bed and attached it to the machine. It is equally obvious that the defendants might segregate the elements of their binding apparatus and not mount them on a frame detachable from the machine.

The binder table of defendants' machine is said by them

to be not present in Gordon's patent. But the "Frame W" is a binder table operating like the defendants', and made open only because in Gordon's machine it must be open to allow the discharge of the grain. The "Marsh Harvester," used by the defendants, discharges the grain over the main wheel and not between the cutter platform and the main wheel. The entire invention of Gordon's first claim has been incorporated in the "Marsh" form of machine by the defendants. The fact that the "Marsh" is, generally speaking, a better type of machine than that to which Gordon first applied his invention, is no justification for the use of that invention without Gordon's consent.

The development of the art has necessitated more complication in and about the defendants' binder than in and about that of the Gordon patent. But the same devices in substance appear in both machines, organized in the same relation to the machine and the work to be done and equally needing and having the full benefit of Gordon's invention. Even the details of Gordon's structure are present. It is to be borne in mind that Gordon had to organize his adjustable binder so that in *every position of adjustment the binder-arm and twister or knotter would be constantly in engagement with the mechanism to operate them*, as well as in definite relation to each other.

This was quite a problem.

His solution of even this special problem, which is not part of the thing claimed, is copied in substance by the defendants.

III.

Nothing in the language of the patent in suit in any way limits it so as to exclude the defendants' contrivance from

its scope. The statement of invention is clearly broad enough to include defendants' structure. It is: "The nature of my improvement consists, first, in the provision of the binding arm, which carries the wire around the sheaf, and which, *in conjunction with the other devices directly concerned in the binding operation*, is made adjustable so as to bring the wire in position to bind at the centre of the gavel, thus suiting the apparatus to grain of any length."

This clearly describes the defendants' adjustable binder, as well as the precise form of the Gordon patent.

The claim is clearly infringed, for its elements appear in the defendants' structure, organized in the same way, having the same method of operation and the same result.

The suggestion that the *rake* is an element of the claim is unreasonable, for the rake has nothing to do with the binding, and is itself one of the portions of the machine as to which the binding apparatus is made adjustable. But can any one contend that the Gordon claim could be avoided merely by substituting some other pusher and holder for the rake? And yet that is all that the defendants have done. They cannot incidentally use the rake for this purpose as Gordon did, because in their machine travelling aprons are substituted for the rake (they were well-known equivalents for the rake), and if they had used a rake on ~~his~~ their cutter platform, it would have been too far away. They, therefore, incidentally use for this purpose other devices in their machine, namely, the packers, which are in effect a rake. "These packers" are made adjustable with the binder, because they extend only a short distance along the length of the grain, just opposite the binder. Gordon's rake was so long that some part of it was always opposite the binder, whatever the position of the latter might be, wherefore no adjustment of it was required. In both instances the binder was in a fixed posi-

tion opposite the rake or packers, when operating. The proceedings in the Patent Office cannot in any way embarrass the complainants. *The defendants have the structure required by the claim as issued.* It does not appear why the amendment was made, but its force was only to make the claim more clear, not to narrow it. As to the force to be given to such amendments, see Goodyear Dental Vulcanite Co. *v.* Davis (102 U. S. 222); Hunt Brothers Co. *v.* Cassidy (53 Fed. Rep. 257, 260).

IV.

Gordon's invention relates to a certain adjustment of the binding apparatus, which was radically new with him and which the defendants use without right. The law gives him redress for this. We desire to call the attention of the Court particularly to the authorities which have settled the rules by which the courts are guided in determining the question of infringement in a case of this sort.

Winans *v.* Denmead (15 Howard, 330) (recently referred to as the basis of the decision of this Court in Hoyt *v.* Home, 145 U. S. 302, and Western Electric Co. *v.* La Rue, 139 U. S. 601).

"Patentees sometimes add to their claims an express declaration to the effect that the claim extends to the thing patented, however its form or proportions may be varied. But this is unnecessary. The law so interprets the claim without the addition of these words. The exclusive right to the thing patented is not secured, if the public are at liberty to make substantial copies of it, varying its form or proportions. And therefore the patentee, having described his invention, and shown its principles and claimed *it in that form which most perfectly embodies it*, is, in contemplation of law, deemed to claim every form in which his invention may be embodied unless he manifests an intention to disclaim some of those forms."

But the description *of one form* even in the claim itself *is not a disclaimer of other forms.*

"It is generally true, when a patentee describes a machine and then *claims it as described*, that he is understood to intend to claim, and does by law actually cover, not only the precise forms he has described, but all other forms which embody his invention. * * * And in the numerous cases in which it has been held that to copy the patentee's mode of operation was an infringement, the infringer had got forms and proportions not described and not in terms claimed.

* * * "The property of inventors would be valueless, if it were enough for the defendant to say your improvement consisted in a change of form; you describe and *claim* but one form; I have not taken that, and so have not infringed.

"Undoubtedly there may be cases in which the letters patent do include only the particular form described and claimed. * * * The reason * * * is not that the patentee has *described* and *claimed* that form *only*; it is because that form only is *capable of embodying his invention*; and, consequently, if the form is not copied, the invention is not used. * * * Where the whole substance of the invention may be copied in a different form, it is the duty of courts and juries to look through the form for *the substance of the invention*—for that which entitled the inventor to his patent * * * and it is not a defence that it is embodied in a form *not described and in terms claimed by the patentee.*"

Mason v. *Graham*, 23 Wall. 261. The plaintiff's patent was for a picker-staff motion for looms. The Supreme Court (per STRONG, J.) held that the "object sought" by defendant's device was the same, and that it was an infringement. The Court said, in comparing defendant's device with the plaintiff's:

"It is true the form and location of the arms differ, *but*

they perform the same functions and in substantially the same manner. * * * That the form of the journal bearing arm of the defendant's motion is unlike that of the complainant's, or that its mode of attachment is different, is immaterial, *so long as it performs the same function in substantially the same way.*"

See also Cochrane *v.* Deener, 94 U. S. 780–789.
Machine Company *v.* Murphy, 97 U. S. 120.
Clough *v.* Barker, 106 U. S. 166.
Hoyt *v.* Horne, 145 U. S. 302.
Western Electric Co. *v.* La Rue, 139 U. S. 601.

ESEK COWEN,
FREDERICK P. FISH,
Of Counsel for Complainants.

Office Supreme Court U. S.
FILED.
OCT 9 1893
JAMES H. McKENNEY,
CLERK.

Supreme Court of the United States.

OCTOBER TERM, 1893.

JOHN H. GORDON, MARY A. GORDON, EXECUTRIX OF JAMES F. GORDON, DECEASED, ELIZA W. OSBORNE, FREDERICK HARRIS AND THOMAS M. OSBORNE, EXECUTORS OF DAVID M. OSBORNE,
vs.
BENJ. H. WARDER, ASA S. BUSHNELL AND JOHN J. GLESSNER. } No. 34.

SAME
vs.
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SAME
vs.
WHITELEY, FASSLER & KELLY. } No. 36.

SAME
vs.
ABEL HOOVER AND WILLIAM GAMBLE. } No. 37.

BRIEF FOR APPELLEES.

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Supreme Court of the United States.

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No. 37.

BRIEF FOR APPELLEES.

OUTLINE OF CONTROVERSY.

These are appeals by the complainants below from decrees of the Circuit Court for the Southern District of Ohio dismissing the bills of complaint. The hearing was

before their Honors, Judges Jackson and Sage. The opinion was prepared by Judge Jackson and concurred in by Judge Sage. It is found on page 785, Vol. 1 of the record in the Warder case. By stipulation (p. 561, Warder Record), the evidence taken in either of the cases is to be used in all, so far as pertinent, with the same effect as if taken and filed in each. This record is in two volumes. That containing the pleadings and testimony will be referred to as Vol. 1; that entitled "Stipulations and Additions to Record" as Vol. 2.

These suits were brought for infringement of three patents granted to James F. Gordon for "Improvements in Grain Binders," the other parties complainant claiming fractional interests under these patents by virtue of certain assignments.

About the same time suits on the same patents were brought by these complainants against most of the principal manufacturers of grain binders in this country. The defendants in all cases (as well those in which this brief is entitled as those in other districts in which no hearing has been had) are manufacturers of twine-binders under the Gorham and Appleby patents, which are in evidence, and under other patents of which they are either owners or licensees. (See Record Warder case, Vol. 1, p. 784; "Exhibit List of Defendants' Patents," Vol. 2, p. 443; dep. Gordon, Vol. 1, p. 646, A. 159–160; Record Hoover & Gamble case, dep. Hoover, p. 16, A. 1–8; "Exhibit Appleby Shop Right," p. 17; "Exhibit Lathrop Shop Right," p. 18; dep. Renwick, p. 65, A. 9–22.)

The answers denied infringement and put in issue the validity of the several patents sued upon. After a portion of the evidence was in, complainants abandoned two of the patents, and at the hearing below the charge of in-

fringement was confined to one out of the eleven claims of the remaining patent, namely, the first claim of patent No. 77,878, granted James F. Gordon, May 12, 1868.

The court below held that there was no infringement of this claim, and that any construction of the claim broad enough to cover defendants' mechanism would render it invalid. (See opinion *post*, p. 25; also p. 785, Warder Record.)

The claim in controversy is:

"The binding-arm H, capable of adjustment in the direction of the length of the grain, in combination with an automatic twisting device, substantially as and for the purposes described."

The adjustment described in the patent, and referred to in this claim as vested in the binding-arm H and the twisting device, is a movability of the arm and twister along their respective actuating shafts, enabling them to occupy different positions within the supporting frame of the binding machine in which they are mounted (which is an inseparable part of the supporting frame of the harvesting machine), and thereby bringing them to any desired point along the platform on which the gavel lies when ready to be bound, dispensing with the adjustability of the binding machine as a whole, which was one of the earliest methods of centralizing the band.

This loose mounting endowed the binding-arm and twister with a capacity for travelling forward and backward within the supporting frame of the binding machine, as distinguished from the permanence of relative position in that supporting frame characterizing those parts which are so fixed to it as to be incapable of movement independent of it. It imparted to them individually a property relative to their supporting frame which had before been possessed by that supporting frame relative

to the reaper. It enabled the operator to adjust the binding-arm to the conditions presented by each individual gavel after that gavel was formed, instead of leaving him to anticipate its probable conditions and set the binding machine as a whole to catch the inflowing swath in such position that it could be bound by an arm and twister occupying a fixed and unchangeable relation to that receptacle, as had been and has been the custom in such grain-binders as have gone into practical use.

The object in giving this adjustability to the binder-arm and twister was to enable them to encircle at or near its center the gavel of grain which the rake deposited upon the deck in position for binding, the composite construction of the binder and harvester rendering it impossible to vary arbitrarily the position in which this gavel would be deposited by the mechanism which brought it within the grasp of the binder-arm. Adjustments for enabling the binder-arm to encircle the grain near the center, irrespective of the length of the grain, were a common incident to grain-binders long before Gordon entered the field, and prior to the time when automatic grain-binders appeared. The practice in hand-binders (binding machines operated by hand) was to place the band at about the center of the grain, varying its position according to the character of the grain. Directions for relative adjustment, to enable the binder-arm and twister to operate at the center under varying conditions of grain, had repeatedly appeared in earlier patents on automatic grain-binders. If there was any room for invention in providing for such adjustment it was confined to the specific means of effecting it. Provisions for adjusting the working parts of machines laterally to bring them into the desired working position with reference to the material on which they operate have so long been fa-

miliar to mechanics that, when the prior patents had recommended this adjustment in grain-binders and stated the line to which it was to be made, there would seem to be no invention in applying any of the usual mechanical expedients for such adjustment; and the validity of the Gordon claim, under any construction that can be put upon it, is confidently challenged. But irrespective of this, the defendants in these cases have not used the adjustments upon which the Gordon patent rests, nor the means by which he provided for such adjustment; nor have they constructed their machines upon any plan which either requires or admits of the adjustability of the binder-arm or twister.

The early recognition of the fact that the grain must be bound at different points, according to its length or condition, is illustrated in patents which had expired before Gordon's was applied for. The original methed of construction was to mount the reaping machine (frequently called harvesting machine) and the binding machine in separate supporting frames, constituting each an independent machine, adapted to be used either separately or conjointly, to be readily attached to each other or detached from each other, and hence inherently capable of being moved or adjusted bodily relatively to each other. By mounting the machinery for reaping and binding in a single, inseparable, supporting frame, Gordon excluded this capacity for the adjustment bodily of the respective machines, and he undertook to compensate for this disadvantage of the composite construction by making the binding-arm and twister adjustable independently of the supporting frame in which they were mounted. This he proposed to effect by mounting both binding-arm and twister loosely on their actuating shafts (to which they had been fixedly at-

tached in earlier binders), and spanning these actuating shafts by a sliding link which would serve to shift the binding arm and twister along their respective shafts simultaneously. This shifting link the patent names "frame W," but it is not to be confounded with the suppporting frame, in which the binding machine is mounted. It is simply a sliding arm moving to and fro within the frame of the machine, and itself supported upon the actuating shafts. It has no office except to vary the position of the binding-arm and twister on their respective shafts, and "shifter" would be the more appropriate name for it. It is a special device, provided solely for this purpose, and depending, for the performance of its office, on the fact that it is movable independently of the supporting frame and rides along the two shafts which drive the arm and twister. This sliding shifter, spanning the two shafts and propelling the twister and binding-arm *pari passu* as they move along their respective shafts, is the only novel feature of this adjustment, since the adjustment of binder-arm and twister relative to other parts of the binding machine, for the purpose of bringing them to the center of the grain, had been described in the Sherwood patent of 1858, and, still earlier, the Watson, Renwick & Watson patent of 1851 had described the adjustment of the grain-binder and harvester, relative to each other, as a means of securing the same end.

None of the defendants have ever made, sold or used a machine containing either a binding-arm or a twister, or any equivalent device, adjustable with reference to the binding-machine in which they are mounted, or with reference to the platform on which the binding takes place, or with reference to the gavel of grain as it lies in position to be bound. The binding-arm and knot-tying mechanism (being twine binders, they do not use twisters) in all

defendants' machines are permently secured in a fixed position and incapable of any adjustment to or fro in the machine. When the machine itself (including the supporting frame in which it is mounted and the binding platform inseparably connected with it) is moved from place to place, the binding-arm and knot-tying mechanism, by virtue of their permanent attachment to it, are necessarily moved with it; but they cannot be adjusted in it.

In these respects the defendants have conformed to the method of construction and adjustment described in the earliest patents upon automatic grain-binders, from which Gordon undertook to make a departure. They have studiously avoided following in the direction of his departure, which (as the evidence hereafter cited shows) led to a complete failure and was immediately abandoned by him. They have, on the other hand, adhered strictly to the type which was developed along the lines from which it was his object to deflect.

The Gordon patent describes a *composite binding harvester*—that is, one inseparable machine intended to both reap the grain and bind it, as distinguished from two machines independently mounted on their several supporting frames and adapted to be used separately or in any desired juxtaposition to each other. Each of the claims of this patent is limited to specific features of construction, which do not appear to have proved practicable, and which did not survive the first field experiments. No machine, constructed in accordance with this patent, has ever been sold or gone into practical use.

Both prior and subsequent to Gordon the patentees of harvesters and grain-binders have generally proceeded on the plan of building each machine as a separate organization, so that any grain-binder could be mounted on any

harvester and the motive power communicated from one to the other, while each machine would be a separate entity, preserving its integrity however placed with reference to the other and when entirely isolated from the other, and capable of independent use.

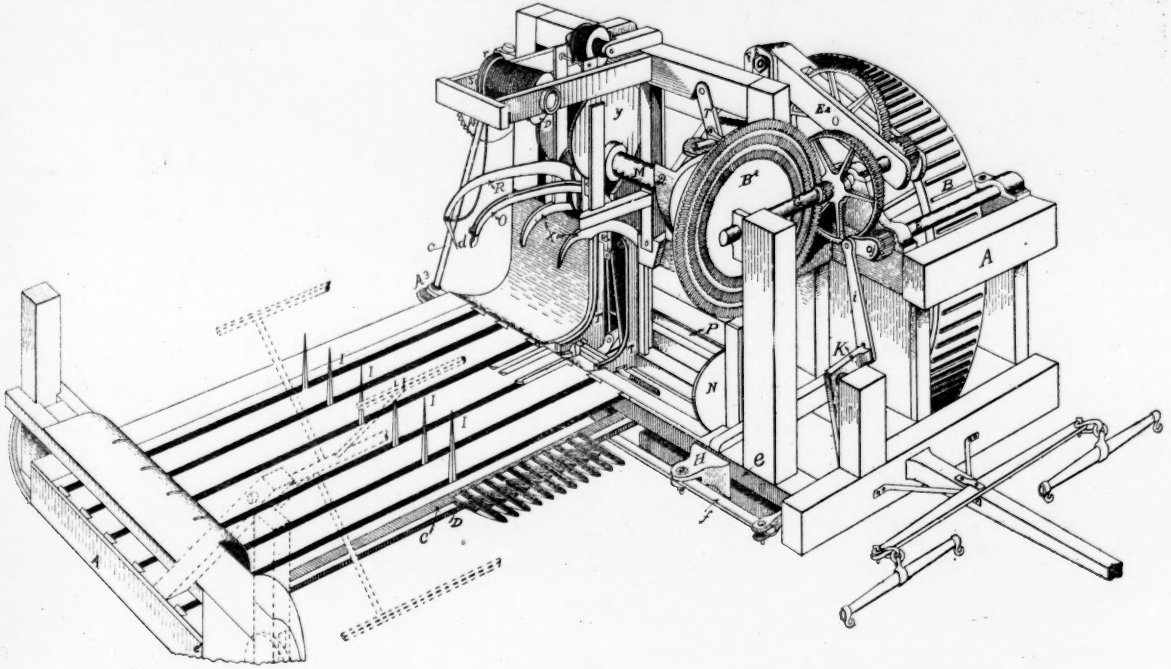
Where the machines were thus constructed as independent organisms, and the binding machine attached to the reaping or harvesting machine, so as to receive and bind the grain as cut and raked into gavels or swaths, the distance from the butts of the grain at which the band was placed would depend upon whether the grain receptacle of the binding machine was hung more or less forward or backward with respect to the platform, the line of the cutting knife, or the conveyor, of the reaping machine. The position of the band on the bundles could be varied indefinitely, not in respect to a gavel already in the machine, but with respect to grain to be thereafter received and formed into a gavel, by moving the binding machines forward or backward on the reaper, or by moving the reaper or its cutting or delivery mechanism forward or backward, relative to the binding machine.

One of the earliest patents on the combination of a harvester with a binding machine (that of Watson, Renwick & Watson, dated May 13, 1851), which performed all the operations automatically, described and claimed a grain-binder and harvester made in separate sections, adjustable with reference to each other to secure the binding centrally of grain differing in length. It first described the binding machine shown in the accompanying cut as mounted upon the main or driving wheel, and communicating the power to the cutting apparatus, which was moved forward and backward in grooves in which it was mounted, for the purpose of making this adjustment.

WATSON RENWICK & WATSON.

1851

GRAIN BINDER.



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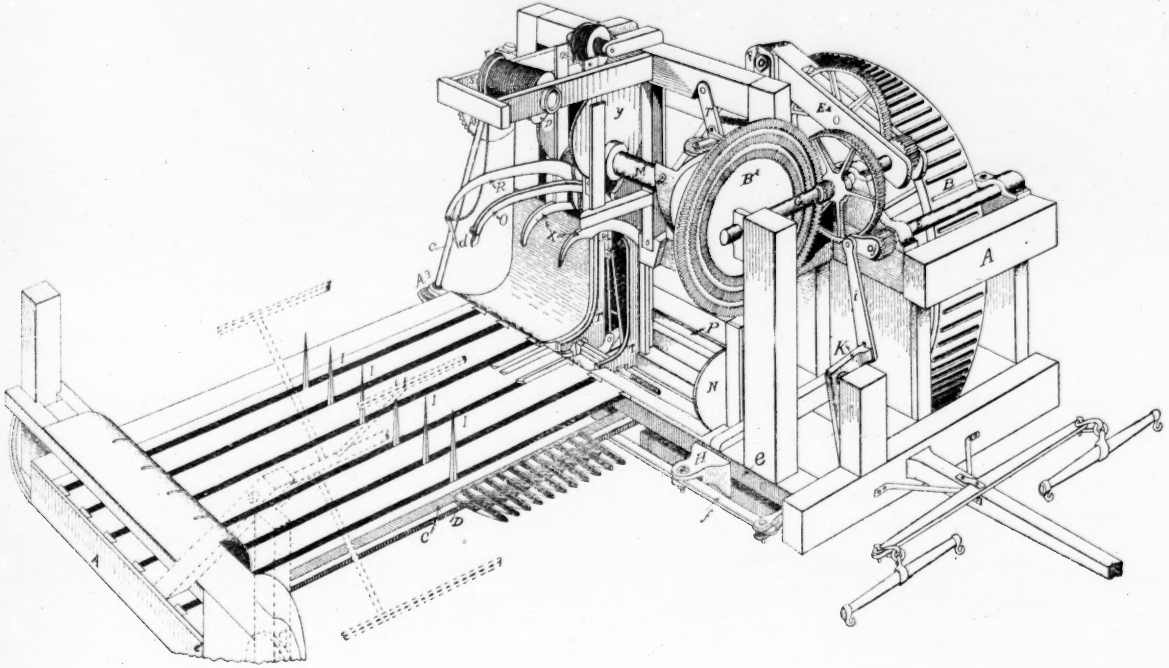


It then describes, as an alternative means for this end, making the binder adjustable with respect to the cutting apparatus, and deriving the power for the binder from the rake of the reaper, and claims specifically (Vol. 2, Warder Rec., p. 93) binding grain of different length

"by moving the binding apparatus nearer to or farther from the front of the platform."

This is precisely what defendants do, and all that this charge of infringement rests upon.

This patent of 1851 states the first part of the invention to consist in

"binding the grain cut by the sickle into sheaves without manual labor and by mechanism, whose movement is derived from, and is dependent upon, the movement of the harvesting-machine." (p. 82.)

Then referring to the supporting frame of the combined or associated machine, it says (p. 83):

"The frame consist, mainly, of two sections, one of which sustains the binding apparatus and the mechanical devices by means of which motion is imparted to the cutting, raking, and binding apparatus from the driving-wheel, which is also attached to this portion of the frame. The other section of the frame forms the platform on which the cut grain falls, and from which it is gathered by the rake, which traverses the platform and delivers the grain to the binding apparatus."

. . . "The cutter-bar, with the fingers and sickle, is supported at its extremities in grooves in the bars *e e'* of the main frame, in which it can be moved so as to set it at a greater or less distance from the center of the raking-platform behind it, thus adapting it to the length of grain which is to be cut." . . .

"In place of making the cutting apparatus adjustable with respect to the binder, it may be advantageous in some cases to make the latter adjustable with respect to the former. . . . The binding apparatus, being independent of the cutting and raking apparatus, may with advantage be applied to many of the harvesting-machines

now in use, or it may be used in connection with a rake to bind grain which has been cut and left in the swath by a mowing-machine. . . . The invention we have described is not only applicable to the binding of grain, but to the binding of other substances into bundles—as, for example, hemp, brush-wood, &c.—and we contemplate its application to these and like purposes wherever advantages would result from its employment. In such cases it may be expedient to make the binding apparatus stationary, to drive it by some suitable power, and to feed to it the brush-wood to be bound by means of the endless apron."

It claimed (p. 93):

"3. The method of adapting the binding apparatus to the length of the cut grain by varying the respective positions of the cutting and binding apparatus, substantially as herein set forth—that is to say, by moving the front of the platform, with the cutting apparatus, backward or forward, or by moving the binding apparatus nearer to or farther from the front of the platform in such manner that the sheaf may be bound near the middle of its length, whether it be long or short."

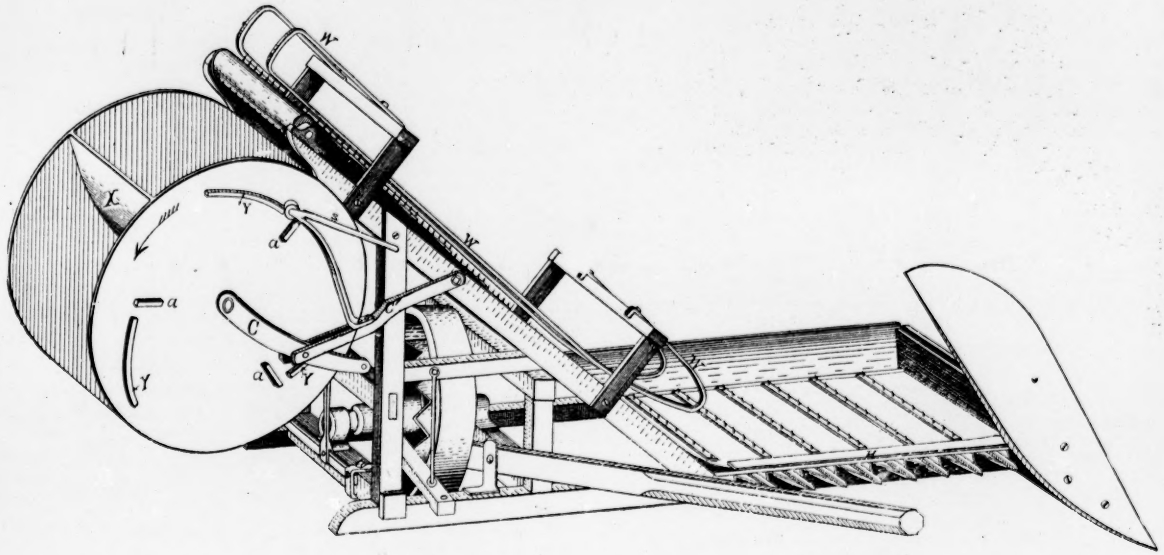
This patent, with its claim exactly commensurate with what the court is now asked to translate the Gordon claim into, had expired before the Gordon patent was applied for.

The Hurlburt patent of Feb. 4, 1851 (shortly before the Watson, Renwick & Watson patent above quoted) exhibited the elevator type of harvester corresponding generally in its methods of delivering grain to the harvesters on which defendants' binders were hung; that is, a harvester bearing an elevator apron carrying the grain upward from the harvester platform, after the manner of the elevator apron of the modern machines, and dropping it on a platform occupying a position where the binding platform of the modern grain-binder is placed, where the grain was automatically collected in sheaves of uniform

HARVESTER RAKE.

HURLBUT

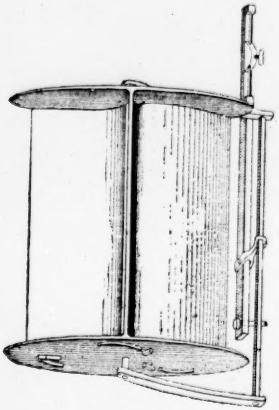
1851.

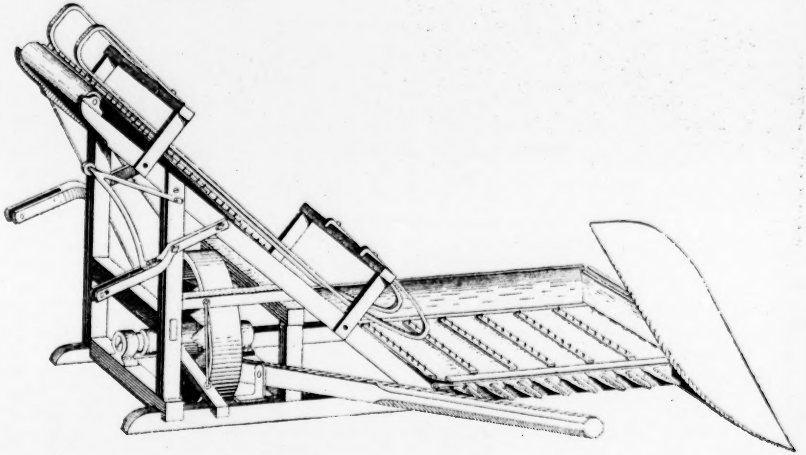


HARVESTER RAKE.

HURLBUT.

1851.

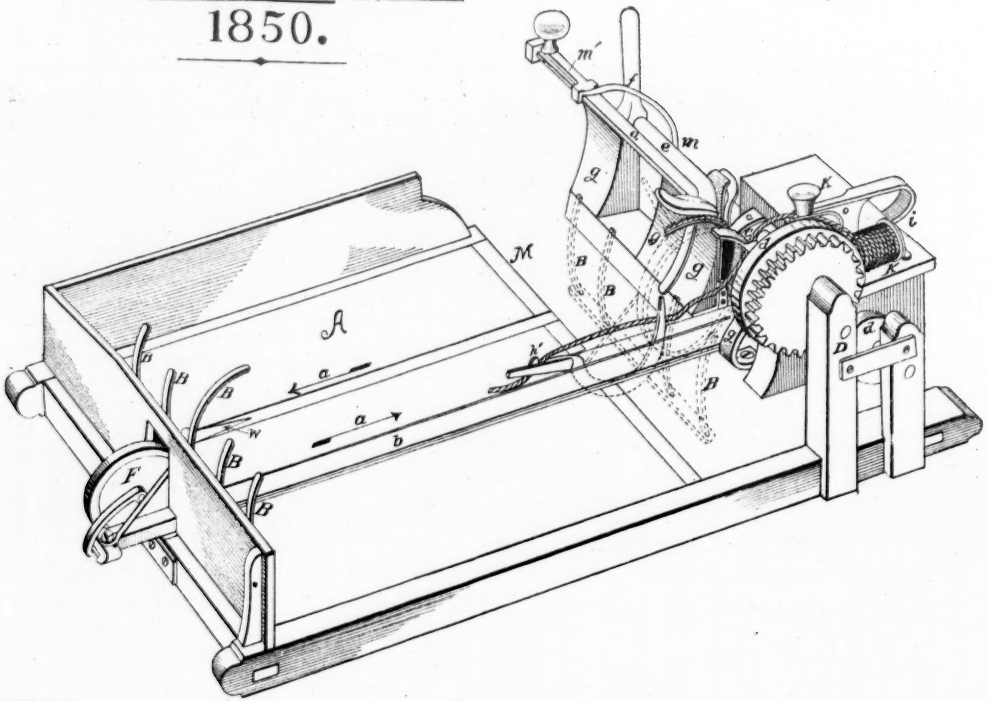




J. E. HEATH.

GRAIN BINDER.

1850.



weight and deposited. This Hurlburt harvester is shown in the accompanying cut. (See Vol. 2, Warder Rec., p. 77.) Prior to this, also, was the Heath patent for a

"machine for binding grain to be attached to harvesting-machines, or to be used separately." (Vol. 2, Warder Rec., p. 74.)

The accompanying cut shows the Heath binder as it appears in the patent entirely separate from the harvester. The specification says (p. 74):

"A is a platform, on which the grain cut by the harvester is delivered, and where it is gathered into a sheaf by means of a rake, B. The rake slides to and fro upon a transverse bar, *b*. It is propelled in the direction of the arrow *a* by means of a strap, *c*, secured to a drum, C, on a shaft, *e*, which is driven by friction wheels *d d* from a counter-shaft, D, to which a continuous rotary motion is communicated from the moving machinery of the harvester."

. . . . . .

"The apparatus by means of which the grain gathered by the rake is compressed into a sheaf is situated at the end of the raking-platform on which the driving machinery is placed. It consists of a set of curved standards, *g g*, against which the grain is forced by the rake, and of the devices for tying the cord round the sheaf."

This Heath patent was dated July 22, 1850, and the names of Watson and Renwick appear as witnesses to it—the same Watson and Renwick who, in the succeeding year, referred in their patent above quoted to the adjustment to bind centrally as to be made by "moving the binding apparatus nearer to or further from the front of the platform." There was, therefore, at the date of their patent already in existence and known to them an independent binder capable of such relative adjustment without any change whatever.

Under date of June 6, 1853, the same Watson and Renwick took out another patent for a reaper and binder

(Vol. 2, Warder Rec., p. 94), shown in the accompanying cut, which they described, apparently in antithesis to those already patented, as follows (p. 103):

"In the machine we are describing the binding apparatus is fixed to the carriage, and the sickle or cutting apparatus is also fixed thereto; hence, if no provision were made for the purpose, the stalks of grain, whether long or short, would always be bound at the same distance from their butts. Grain, even in the same field, varies considerably in the length of its stalks, and it is desirable that the sheaves should be bound near about the middle of their length. In order to effect this result in a machine like the present, in which the sickle and binder are not made adjustable with respect to each other, the conveyor is constructed in such manner that it delivers the grain upon the elevated platform B′ with the middles of the stalks in a proper position for receiving the binding band, and that, too, whether the grain cut be long or short, within certain limits. This is effected by shifting laterally the upper extremities of the conveyor bands, while the lower extremities maintain always the same relative position with respect to the raker."

This patent claimed in its third claim (p. 121):

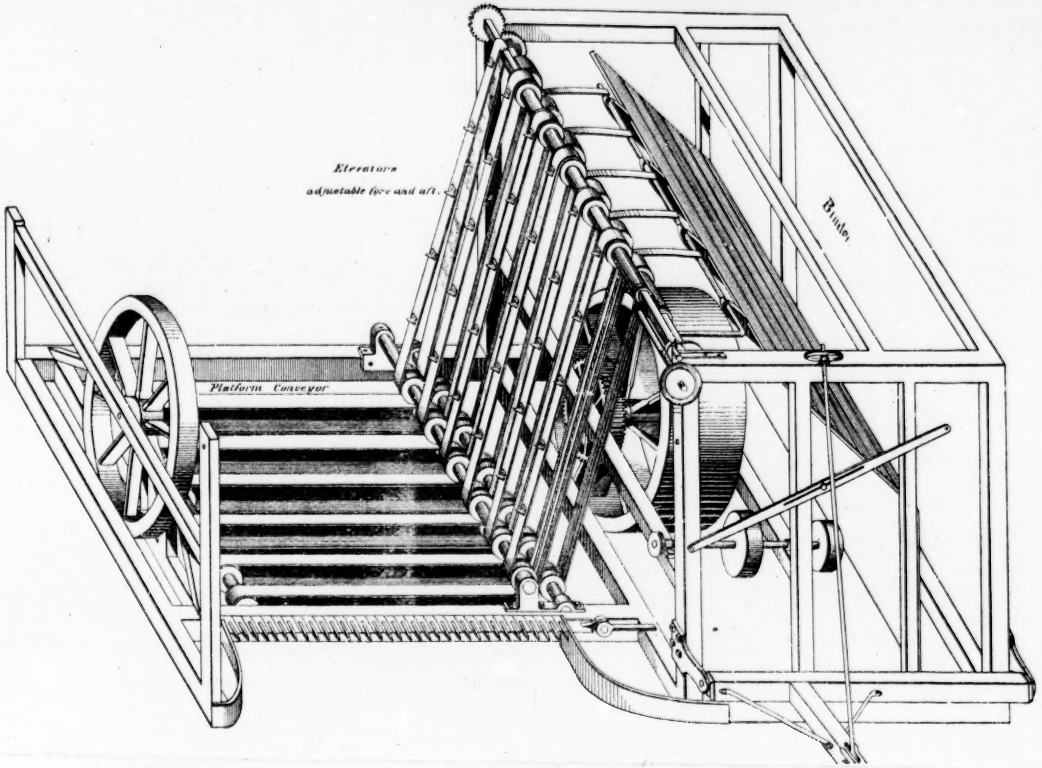
"The shifting conveyor, by means of which sheaves of varying length may be bound round the middle without changing the relative positions of the cutting and tying machine, substantially as herein set forth."

Throughout the patent the fact that the relative adjustment of the binding machine and reaping machine was a familiar means of adapting the band to bind centrally grain of different length is made conspicuous, the purpose of the invention in this respect being to provide for the same object without moving the two machines relatively to each other.

Intermediate between these patents (which had expired before the application for the Gordon patent here in suit) and the time Gordon entered the field, the plan of mount-

WATSON & RENWICK.

Harvester and Binder 1853.



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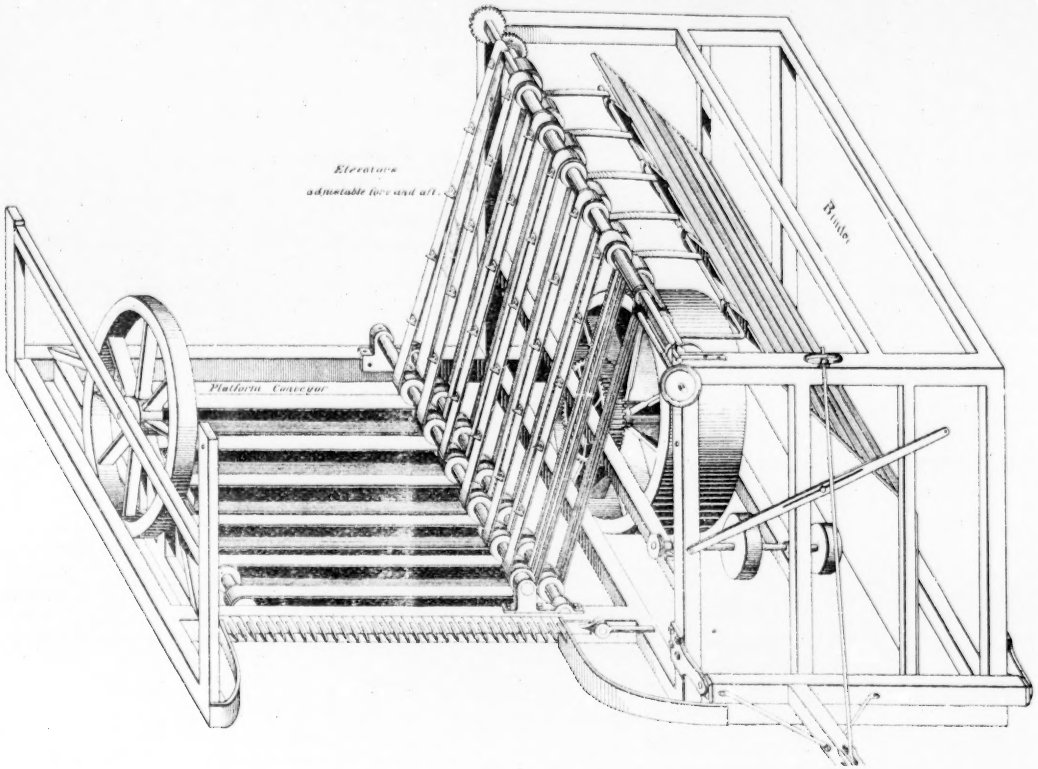
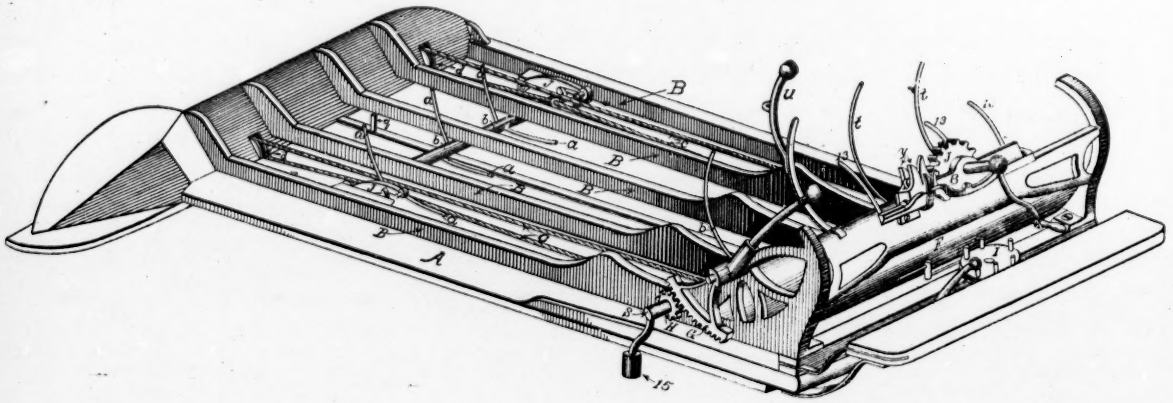


SHERWOOD.

1858.

GRAIN BINDER.



ing the binding machines and the harvesting machines in independent frames, so that they could be hung one upon another in such position as to communicate motive power and as to cause the grain to be delivered from one to the other, was generally pursued. Illustrations of this are found in, among others, the following patents:

The McPhetridge patent of November 18, 1856, for "Improved Automatic Binder for Grain Harvesters," which states the invention to consist

"in the peculiar construction of the automatic binder for grain harvesters" (Vol. 2, Warder Rec., p. 126),

shows the binding-arm and wire-twister, as well as the other parts that constitute the binder, as mounted in a solid frame independent of the harvester.

The Childs patent of March 2, 1858, for

"A New and Improved Raking and Binding Attachment to be applied to Reapers" (Vol. 2, Warder Rec., p. 132),

has the binding, gaveling, and knot-tying mechanism, all mounted in a solid frame, and attached to the reaper so that the gaveling mechanism of the binder gathers the grain from the platform of the reaper, the patent describing the operation of the binding attachment as follows:

"Thus it will be seen that the cut grain is raked off the platform, bound into sheaves or bundles, and discharged from the machine, the several parts all working automatically." (p. 135.)

The Sherwood patent of September 14, 1858, for "Improvements in the Raking and Binding Apparatus of Harvesters," describes the gaveling and binding apparatus (shown in the accompanying cut) as mounted in an independent frame, and says (Vol. 2, Warder Rec., p. 130):

"My invention relates to a raking and binding apparatus which may be connected to any grain harvester, its

object being to gather the grain into a gavel, bind it up into bundles, and deliver it thus bound up onto the ground."

It further says (p. 142):

"The twisting apparatus and its attachments may be made adjustable on the concave, for the purpose of bringing the apparatus to about the center of the bundle, whether the straw be short or long. The wire-carrier of course must be similarly adjustable, so as to act with the twisting and cutting contrivances."

The "concave" referred to is the binding deck or platform, and the "wire carrier" is the binder-arm, so that this description corresponds literally to the claim of the Gordon patent.

The Sherwood patent, of August 30, 1859, for "Improvements in Grain Binding Mechanism," describes an independently mounted binder and states (Vol. 2, Warder Rec., p. 146):

"One of the principal features of my invention consists in the fact that my grain-binder apparatus may be connected to any mowing-machine already constructed without changing any of its material parts, or it may be removed therefrom and leave the machine as perfect as it originally was, its attachment or removal in nowise changing the construction and character of the mowing-machine as a whole."

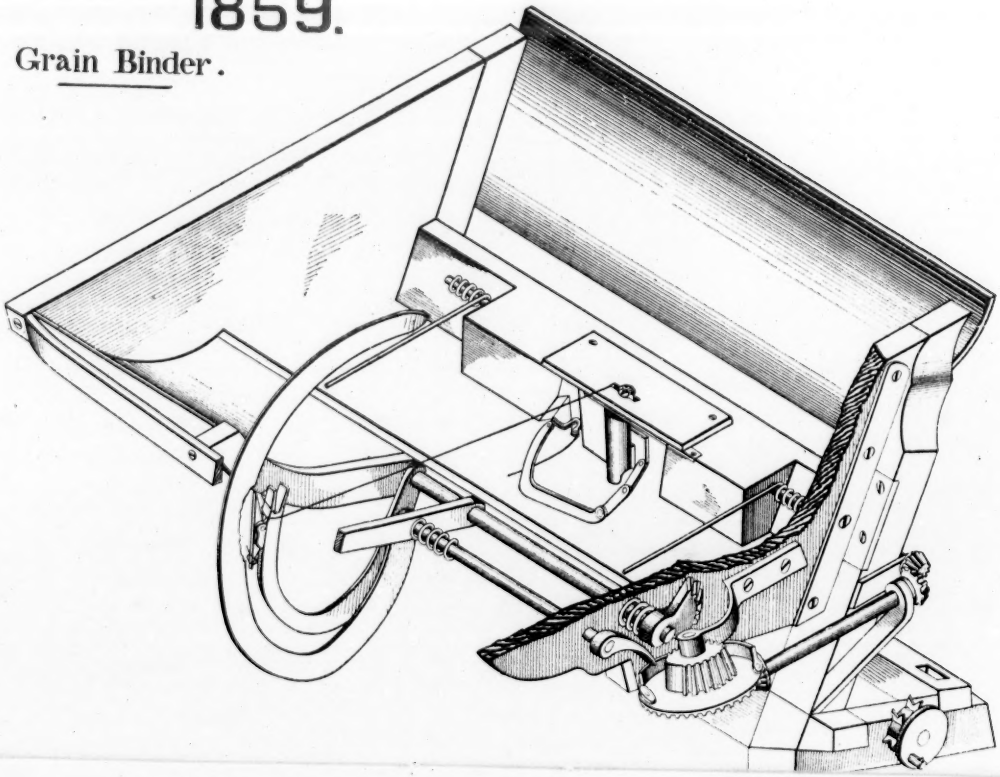
Also, in another portion of the specification (pp. 146–147):

"My binding apparatus is applicable to any of the generally known and used machines, and can be connected to or removed from them without any detriment to their use in other respects. . . .

"The machine need not be altered in any of its essentials, nor need it be specially constructed for the reception of my binding apparatus. On the contrary, I make the binding mechanism independent of any form of machine, and connect it to or with any of the forms of machines

OSBORN.
1859.

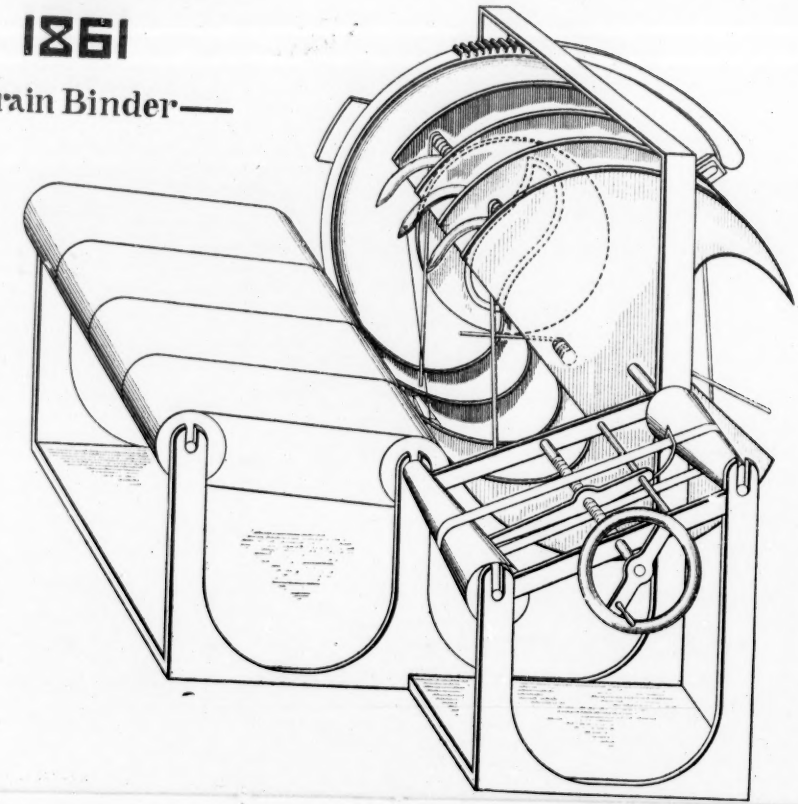
Grain Binder.



REYNOLDS.

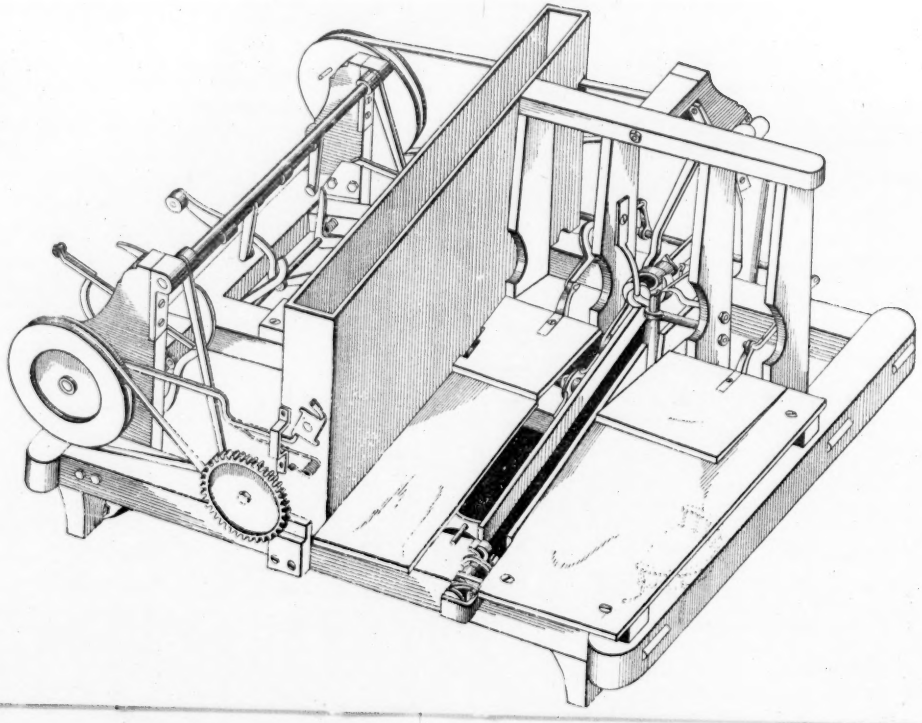
1861

—Grain Binder—



GOODYEAR.

Grain Binder 1865.



already constructed. Or I can remove it from any machine to which it has been applied, and leave the machine with all its parts or facilities for ordinary delivery, the same as they were originally."

The Osborne patent of June 14, 1859, for "Grain-Binder," shows the binder mounted solidly in an independent frame, as exhibited in the accompanying cut, and says (Vol. 2, Warder Rec., p. 143):

"A is a binding-box, connected in any suitable manner to a reaping-machine, into which box the grain to be bound up is brought, either by a conveying belt or apron, or by a rake operated by hand."

The Reynolds patent of February 12, 1861, for "An Improved Machine for Binding Grain," describes the binder as mounted in an independent frame, and states that it is

"attached to the frame of a reaper by any convenient means." (Vol. 2, Warder Rec., p. 151.)

The Reynolds binder, as exhibited in this patent, is shown in the accompanying cut. It is entirely independent of the harvester, and capable of being placed in any desired position relative to the grain delivery.

The Goodyear patent of November 7, 1865, for "Grain-Binder," shows the binder in an independent frame, disconnected from the harvester and provided with short legs or pedestals, which enable it to be readily placed in any desired position relative to the harvester or grain delivery apparatus. The accompanying cut shows that binder as illustrated in the patent.

The specification says (Vol. 2, Warder Rec., p. 160):

"My invention relates to improvements in machinery for bundling and binding grain; and consists in automatic mechanism which first twists a band of straw, then gathers the grain into a bundle, places the said twisted straw band around the said bundle, twisting the two ends of the

said bands together to secure the bundle in similar manner as is usually done by hand.

. . . . . .

"A is the frame or bed of the machine, which may be attached to or made part of an ordinary reaping-machine. B is the driving shaft, supported and made to revolve in proper bearings C. D is the platform, upon which the grain is placed automatically from the reaper or otherwise, so as to lie across the opening in the platform D."

The Barta patent of May 15, 1866, for "Improved Raking and Binding Attachments for Reapers," says (Vol. 2, Warder Rec., p. 164):

"The object of the invention is to obtain a device for the purpose specified which will be capable of being put in motion at longer or shorter intervals, as occasion may require, and be also capable of being adapted for binding long or short grain."

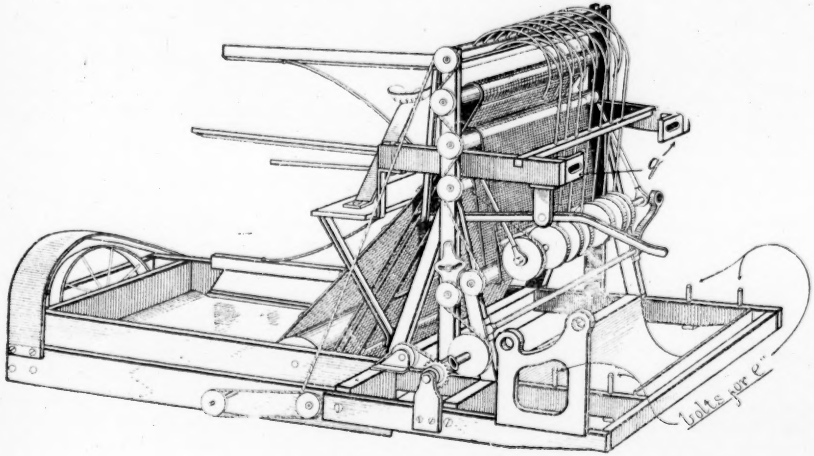
Also (p. 166):

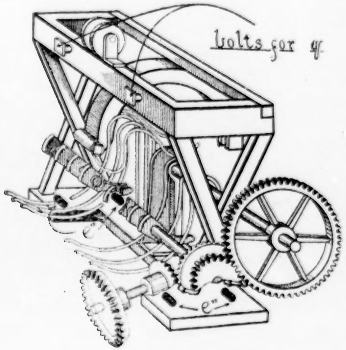
"The frame O I termed a sliding one, in consequence of it being capable of adjustment on the bed N in a longitudinal direction therewith, so as to be nearer to or further from the outer end of the bed N. This adjustment of the frame O admits of the cut grain being delivered to the cradle centrally therewith, the adjustment compensating for the variation in the length of the grain. When long grain is being cut the frame O is adjusted outward on the bed N as far as possible, and adjusted inward when short grain is being cut. The frame O is moved by means of a lever, A′, having a crank, B′, at its lower end, which crank is connected by a rod, *n*, with frame O."

The Carpenter binder, which was adjustably mounted on the harvester and moved backward and forward for the purpose of bringing it to the center of the grain, is illustrated in the accompanying cut. The evidence showing the Carpenter binder thus adjusted to have been in the field in the harvest of 1865 and for each season thereafter, until after the Locke binder (which was adjustable in the same way) went into use, is cited hereafter. It

CARPENTER

COPY OF EXHIBIT No 142





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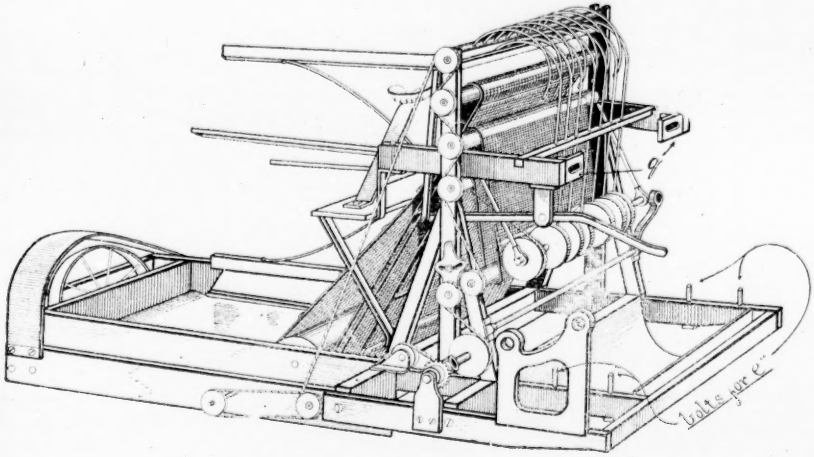
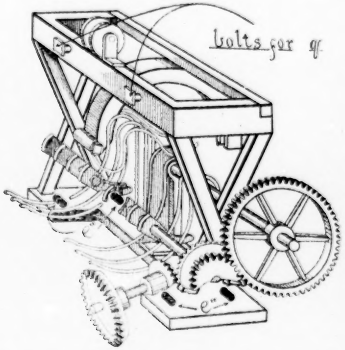
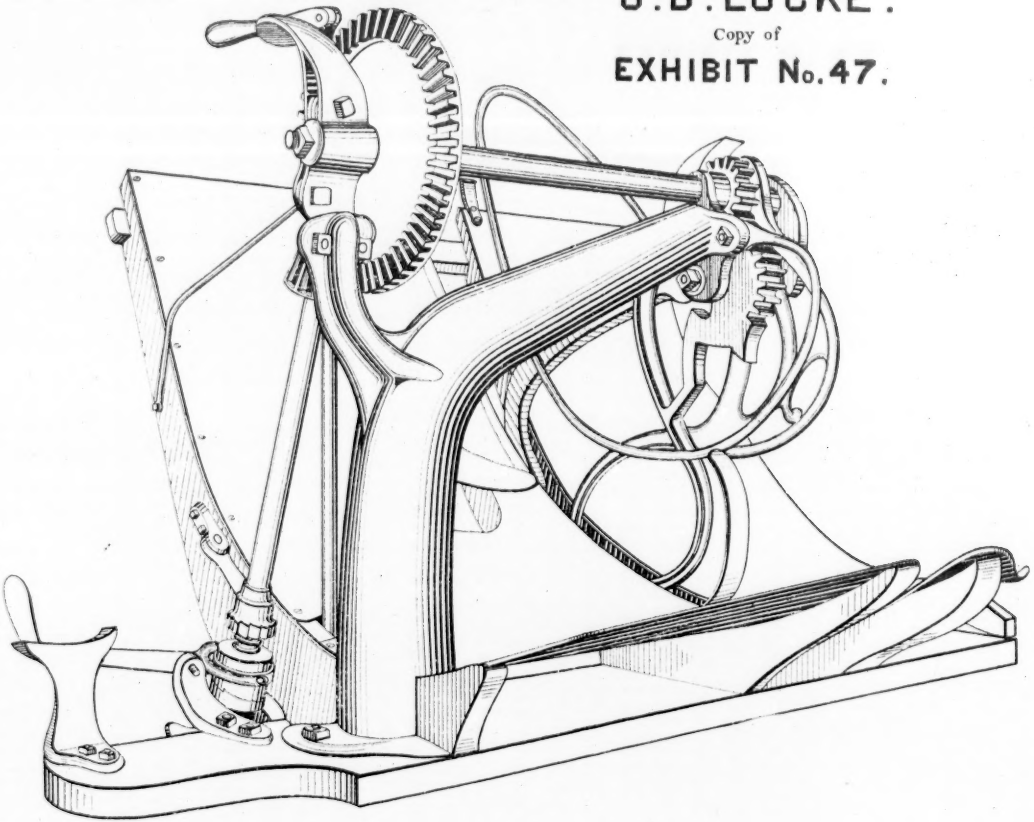




S.D.LOCKE.

Copy of

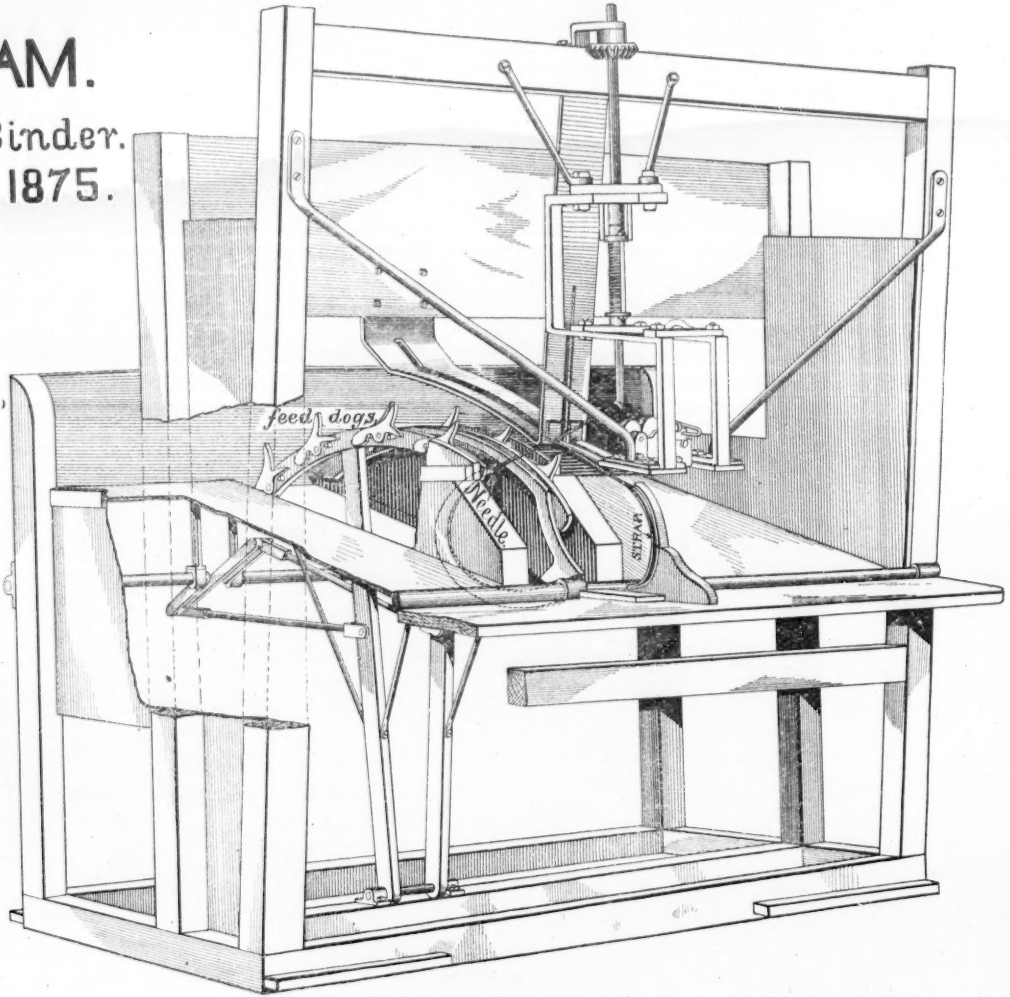
EXHIBIT No.47.



GORHAM.

Grain Binder.

1875.



employed the exact method of mounting and adjusting the machines relative to each other which has prevailed from that time to this.

The Locke binder, which was also adjustably hung upon the harvester, for the same purpose, and adjusted in substantially the same way, and which was built in 1871 and thereafter, used in the harvest field of 1872, and placed on sale in 1873 (as shown by evidence hereafter cited), is is illustrated in the following cut.

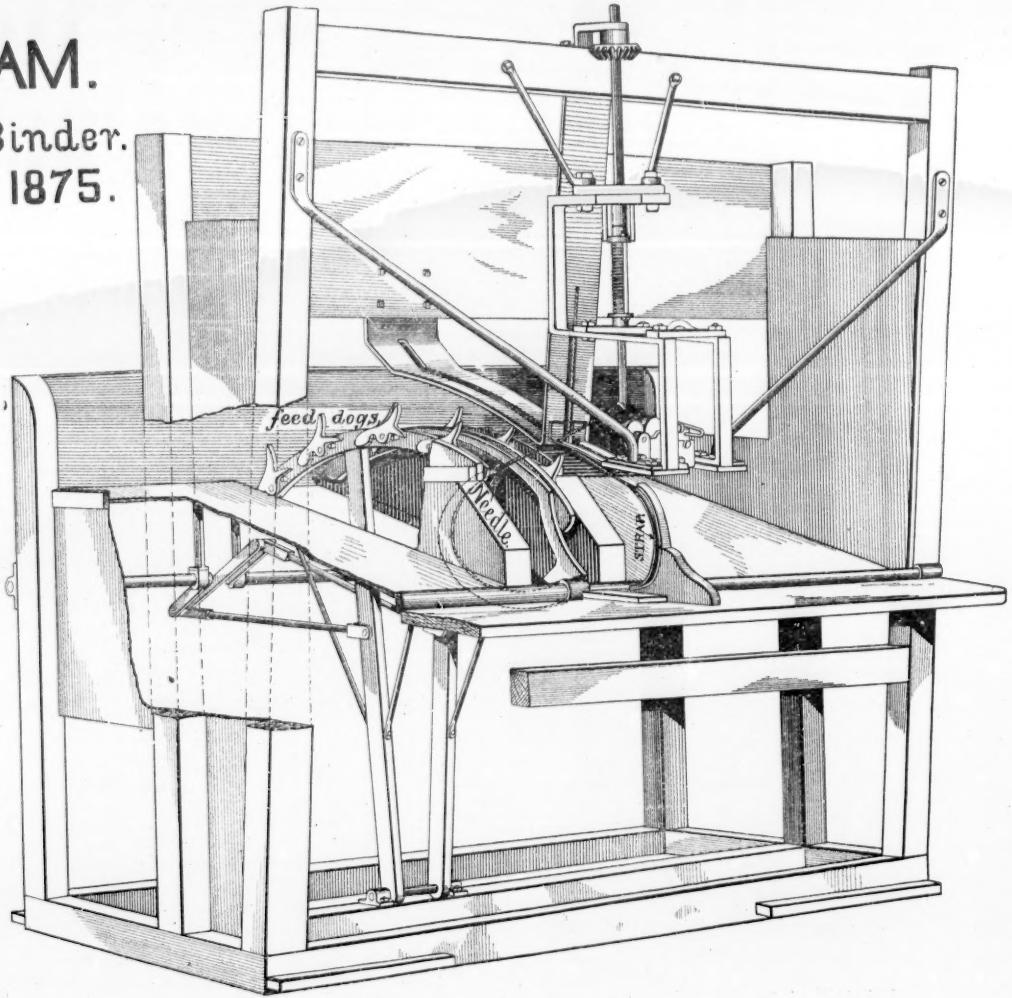
In the harvest of 1874 the Gorham automatic twine-binder, shown in the following cut, went into use in the field. Its plan of construction and the conditions of its operation being such as to absolutely exclude any relative adjustment of the binder-arm in respect to the mechanism by which the grain to compose the gavel was brought into the binding receptacle and thrust within the grasp of the binding-arm, the preservation of a fixed alignment between all these parts being one of the fundamental characteristics of this machine. This machine is shown in the Gorham patent of February 9, 1875, in evidence, and its history prior and subsequent to the application for that patent, so far as relevant, appears in evidence hereafter cited.

It was always mounted in a frame independent of the harvester frame, and the machine itself was consequently capable of being adjusted to receive the grain in any desired position, and was so adjusted from the outset. A lever for the purpose of such adjustment was provided in the machine as originally built, and as shown in the patent. Some of the Gorham machines, during the years 1876 to 1879, were provided with a lateral shifting conveyor apron, adjustable for the purpose of delivering the grain centrally after the manner described in the Watson & Renwick patent of 1853, thus

GORHAM.

Grain Binder.

1875.



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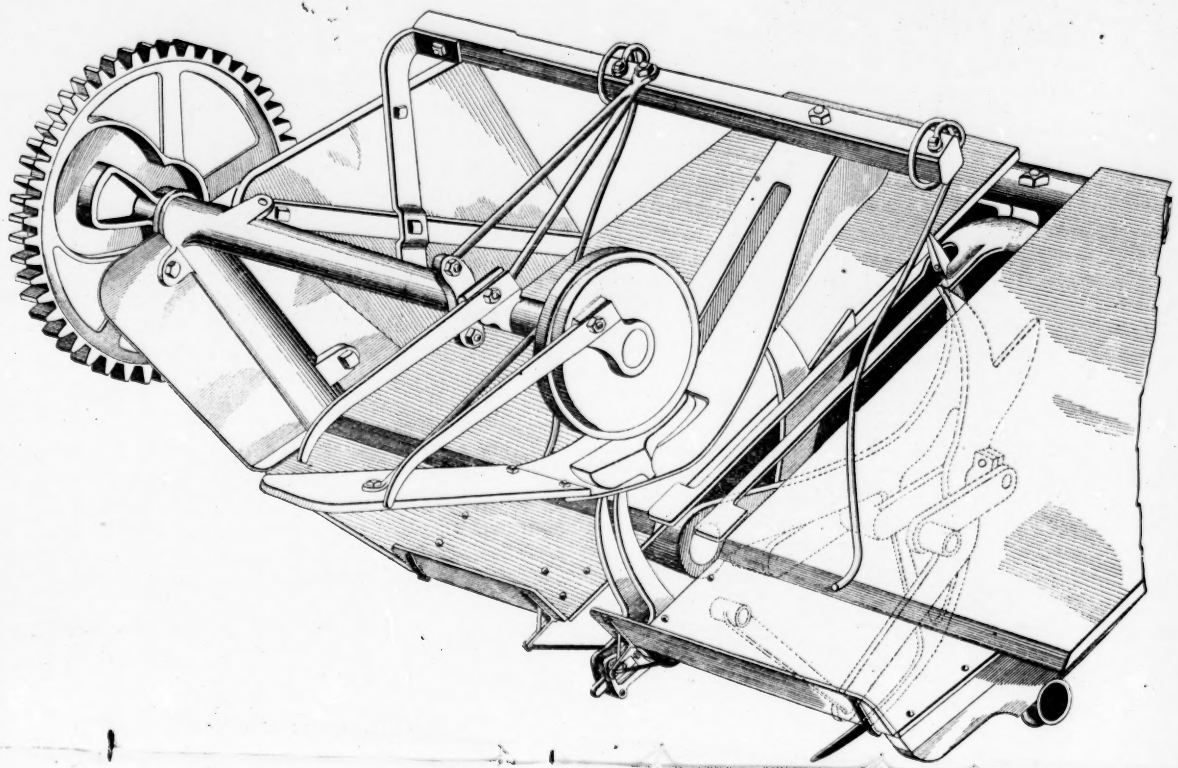
dispensing with any occasion for lateral movement of the binding machine.

The Appleby patent of February 18, 1879, also exhibits an automatic twine-binder constructed on a plan which excludes any adjustment of the binder-arm relative to the bundle receptacle, or to the mechanism by which the grain is brought into that receptacle and formed into a gavel, a fixed and invariable alignment between all these parts being an essential characteristic of the machine, upon which its performance is dependent. This binder has always necessarily been mounted in an independent frame hung upon the harvester in any desired position.

As already stated, the defendants are all licensees under both the Gorham and Appleby patents, and their machines all have the same inherent incapacity for relative adjustment of the binder-arm in respect to the bundling receptacle and the mechanism by which the grain is brought within reach of the binder-arm and formed into a gavel.

Illustrations might be multiplied of the uniformity with which manufacturers have adhered to the plan of making the binder mechanism an independent organization, having its individual supporting frames capable of being bodily moved to and fro with reference to any harvesting machine in connection with which it might be desired to use it, and of being altogether removed from that machine, but with no capacity for *internal* adjustment. Those given are sufficient to show that the Watson, Renwick & Watson plan of building the binding machine and the harvester separately, and making one attachable to or detachable from the other (enabling the adaptation to different lengths of grain to be effected by moving the machine bodily with respect to each other), had been generally pursued prior to Gordon,

THE APPLEBY BINDER.



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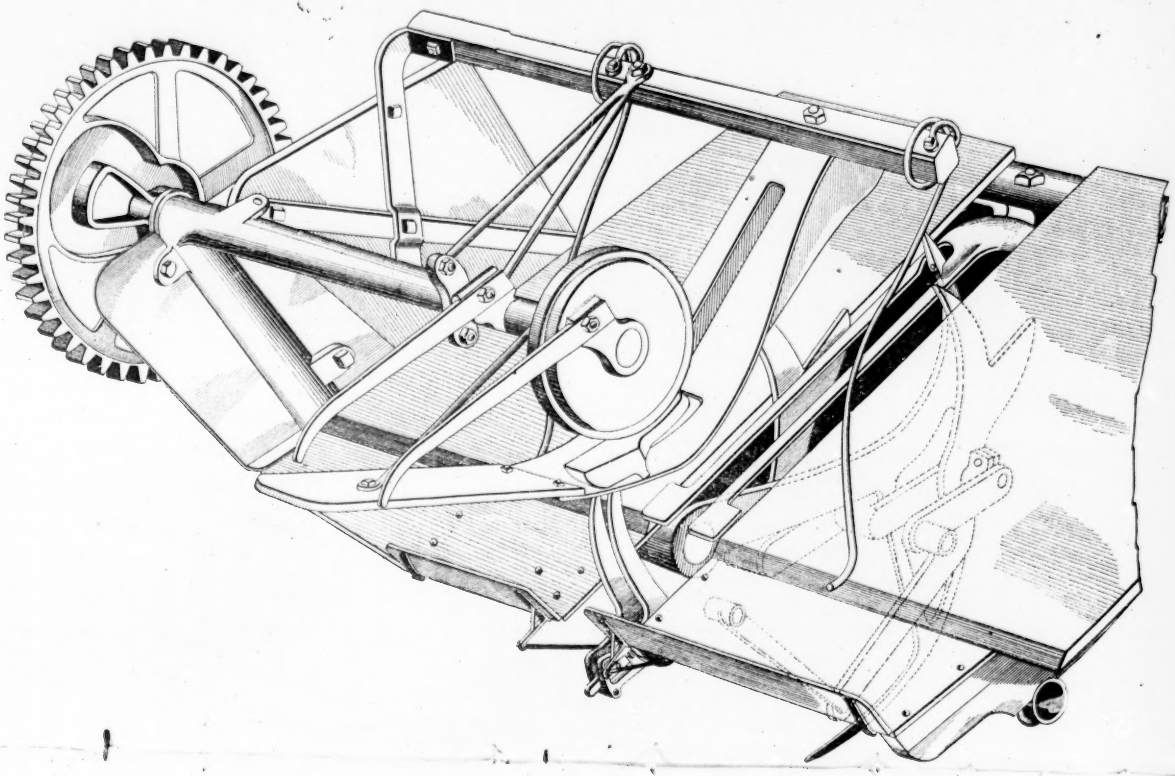
THE APPLEBY BINDER.



as it has been since. Such separable machines, movable with respect to each other, were familiar to the art long before he entered the field.

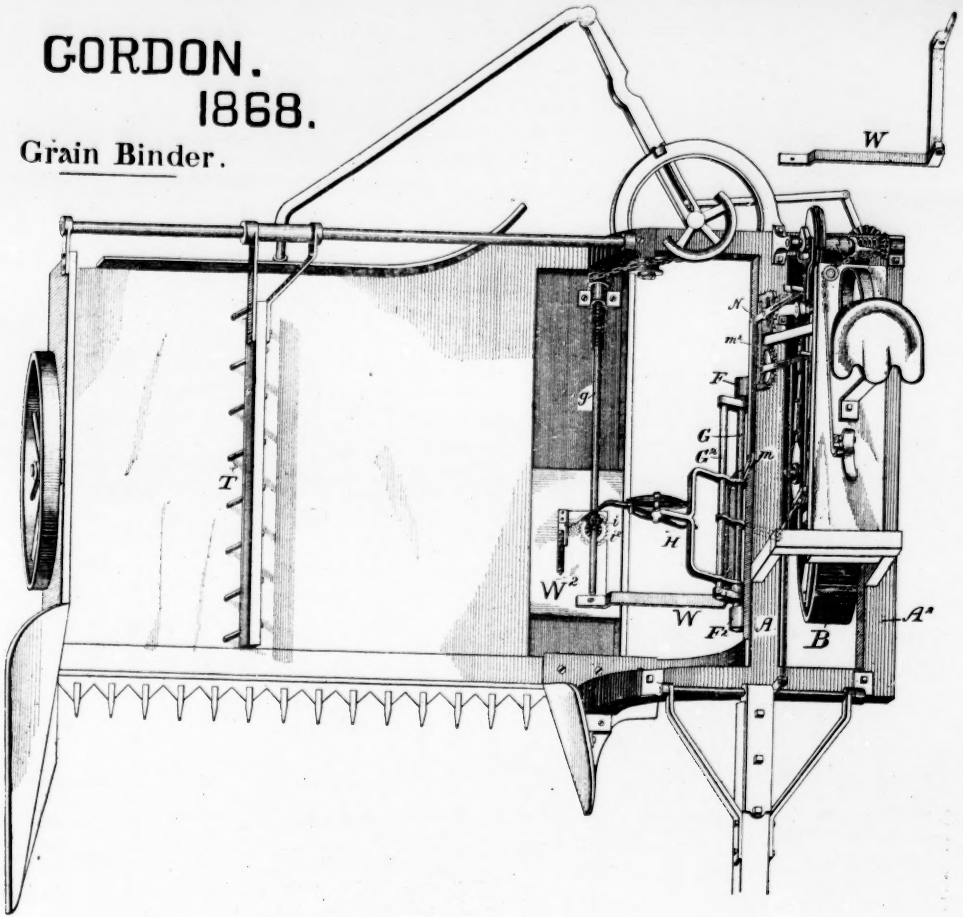
The departure which Gordon made (or rather undertook to make, for the machine never went into actual practical use, and was abandoned after considerable money, furnished by others, had been sunk in experiments upon it) consisted in building the reaper and grain binder as a single composite machine, mounted in one rigid, inseparable frame, in which the reaper platform was made to serve also as the binder platform, and the rake of the reaper made an agent in the binding operation, being the only element provided for forming the gavel and depositing it in binding position. By this construction he aimed to lessen the parts of the aggregate machine, and dispense with the independent mounting of the binder and harvester, respectively, also to avoid the necessity of raising the grain, as was done in the elevator machines. As the supporting frame of the binding mechanism was the same as the supporting frame of the reaping mechanism, the binding machine could no longer be adjusted bodily with reference to the reaping machine, after the manner of the earlier grain binders. As there was no elevator apron, the adjustments to centralize the band could not be made in accordance with the Watson & Renwick patent of 1853, which provided for varying the position of the elevators with reference to the binding-table when the two machines were so connected that they could not be adjusted with reference to each other. Gordon had, therefore, to provide an adjustment that would dispense with moving the binding machine bodily and would not involve any change in the position of the gavel-forming apparatus. This he did in the manner prescribed in the Sherwood patent of

1858, namely, by making the shafts of the binder-arm and the twister, respectively, parallel with each other, mounting the binder-arm loosely on its actuating shaft, and the twister loosely on its actuating shaft, so that they could both be slid along the binding deck and thus change their position with reference to this deck and the gaveling mechanism while preserving, approximately, their parallelism to each other. In order that this adjustment might be effected simultaneously, and the binder-arm and twister be preserved as nearly as possible in alignment, he placed a shifting-arm or link transversely between the shaft that operated the binding-arm and the shaft that operated the twister, so that, as this link was pushed forward or backward, it would travel on these two actuating shafts and carry with it the binder-arm and twister, respectively. The binder-arm is marked H in the accompanying cut of the Gordon machine, and the shifting-arm or link is called a frame and marked W. His provision for adjustment is thus described in the specification (Vol. 2, Warder Rec., p. 5):

"Attached to the side piece, A, of the frame are bearings F and F^2, extending downward and receiving a horizontal rock-shaft, G. Attached to said rock-shaft is a second pair of bearings r and r^2, that receive a second shaft, G^2. To said shafts G and G^2 is attached the binding-arm H, the same extending toward the platform and over the twisting device. Said arm is so fitted to the shafts as to be capable of being moved thereon in the direction of their length. Beneath said shafts G G^2, and connected to the shaft G just outside of the bearings of arm H, is a frame, W, that is also so fitted to the shaft as to be capable of moving thereon longitudinally. Said frame is bent around so as to bring the ends thereof at right angles one with the other. The end extending toward the platform is bolted to the frame-work W^2, carrying the twisting device and its appurtenances. Said frame W^2 is held in guides or ways parallel with the shafts

GORDON.
1868.

Grain Binder.

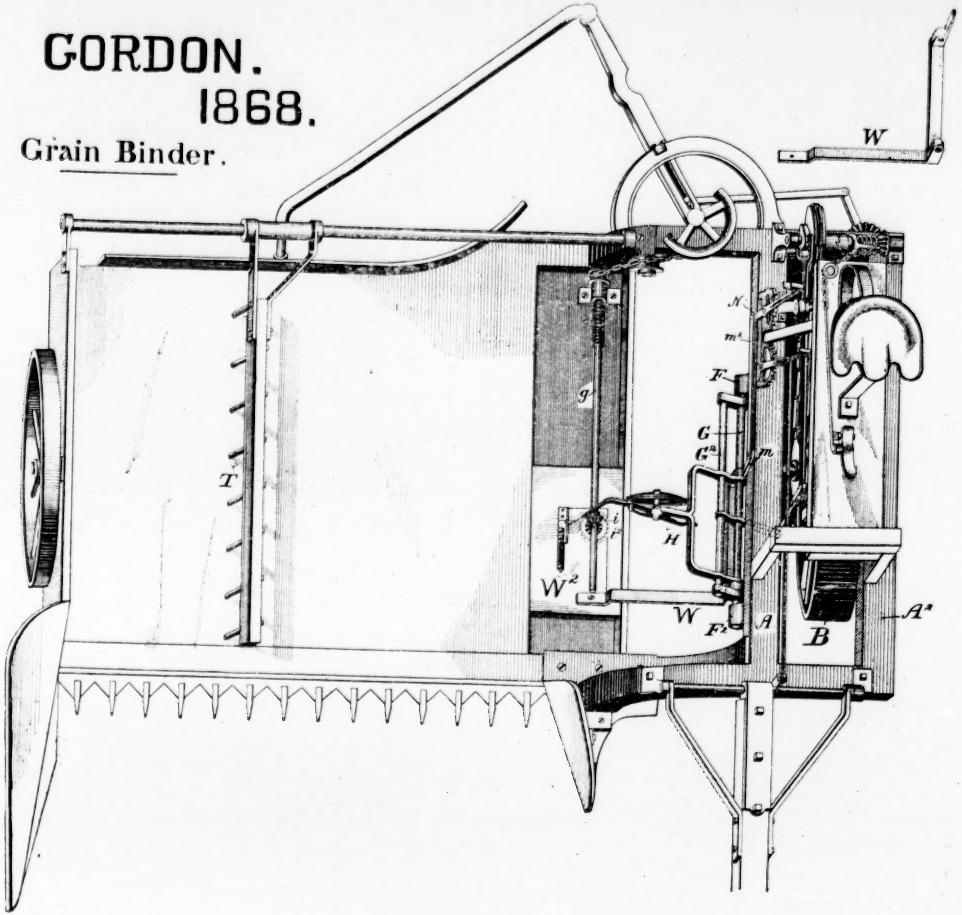


1858, namely, by making the shafts of the binder-arm and the twister, respectively, parallel with each other, mounting the binder-arm loosely on its actuating shaft, and the twister loosely on its actuating shaft, so that they could both be slid along the binding deck and thus change their position with reference to this deck and the gaveling mechanism while preserving, approximately, their parallelism to each other. In order that this adjustment might be effected simultaneously, and the binder-arm and twister be preserved as nearly as possible in alignment, he placed a shifting-arm or link transversely between the shaft that operated the binding-arm and the shaft that operated the twister, so that, as this link was pushed forward or backward, it would travel on these two actuating shafts and carry with it the binder-arm and twister, respectively. The binder-arm is marked H in the accompanying cut of the Gordon machine, and the shifting-arm or link is called a frame and marked W. His provision for adjustment is thus described in the specification (Vol. 2, Warder Rec., p. 5):

"Attached to the side piece, A, of the frame are bearings F and F^2, extending downward and receiving a horizontal rock-shaft, G. Attached to said rock-shaft is a second pair of bearings r and r^2, that receive a second shaft, G^2. To said shafts G and G^2 is attached the binding-arm H, the same extending toward the platform and over the twisting device. Said arm is so fitted to the shafts as to be capable of being moved thereon in the direction of their length. Beneath said shafts G G^2, and connected to the shaft G just outside of the bearings of arm H, is a frame, W, that is also so fitted to the shaft as to be capable of moving thereon longitudinally. Said frame is bent around so as to bring the ends thereof at right angles one with the other. The end extending toward the platform is bolted to the frame-work W^2, carrying the twisting device and its appurtenances. Said frame W^2 is held in guides or ways parallel with the shafts

GORDON.
1868.

Grain Binder.



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carrying the arm H, and is capable of a longitudinal movement—that is to say, a movement parallel with the grain as it lies upon the platform."

By this construction he not only avoided the necessity for moving the binding machine bodily, and confined the movement to parts of comparatively little weight, but he was (theoretically, at least) able to shift the binder-arm and twister with reference to the gavel as it lay on the platform where it was bound, and to adjust the binding-arm with respect to the particular gavel which was before him, the operation of his machine being such as to gather the grain in separate gavels on the platform before it was bound, instead of (after the manner of the successful modern machines) delivering it in a continuous stream into the grain receptacle of the binder and providing the binder with fingers which reach out and snatch from this receptacle handfuls of grain, grasping each handful at the point where the binding-arm is to encircle it, and thrusting the successive handfuls into the binding receptacle and against the binding cord by feeding mechanism to which the binder-arm and tying devices necessarily preserve a fixed and unchanging alignment. Any adjustment with reference to the grain as it lies on the platform where it is to be encircled by this binder-arm is impossible in modern binders, including defendants'. The theoretical advantage obtained by Gordon's adjustability of the arm and twister was, however, much more than offset by the practical difficulties introduced, which rendered this type of adjustment, as well as this type of machine, unsuitable for use. The absolute precision of registration between the binding-arm and the tying mechanism, which is indispensable to their proper working, could not be preserved where there was any such looseness in mounting as was necessary to allow either of these parts

to be adjusted with reference to the supporting frame of the machine. An almost infinitesimal departure from exact registration would prevent the proper operation of the complex and delicate mechanism by which the tying is accomplished. The jar to which the machine is subjected when operating in the field, particularly when travelling over rough ground, would aggravate the disturbing effect of any looseness in the mounting of these parts. Considerable looseness in the bearings would be indispensable to the adjustments proposed, since, if there was approximate closeness of fit, the rust and dust, which gather upon machines used in the field and exposed to the elements as these are, would soon bind the parts in place so that an adjustment would be impossible. The importance of separating the binding machine from the harvesting machine so as to preserve the integrity of each, and to use each apart from the other, seems to have much more than outweighed any advantage there might be in making some of the elements common to both parts of the machine. No method of forming the gavel and presenting the grain for binding which was compatible with the lateral adjustment of the binder-arm or knotter has ever proved practicable in automatic twine-binders. The endowment of the binder with the capacity for reaching out after the grain, seizing it in small handfuls, at the point in its length where it is to be bound, and applying the entire force which forms the gavel in constant alignment with the binding-arm, has proved a primary condition of a successful binder, and none have survived which did not adhere to this condition. Gordon's adjustable binder-arm was absolutely irreconcilable with this mode of operating, and had to be rejected before a successful binder was invented. Applying the binding-arm so as to do its work upon the reaping platform (while it

has been the constant project of theorists who thought to avoid the waste of power and space in elevating the grain) has never been a success. There are difficulties about forming a gavel, and about ejecting it, as well as about binding it, at that point, and the harvesters with their elevator deliveries (employed in the Watson, Renwick & Watson, Watson & Renwick, and other early machines), with the independent binding machines mounted in their solid frames and having all their parts immovably secured therein, have taken and kept possession of the field to this day.

When in the Patent Office, Gordon undertook to patent broadly

> "A binding device or mechanism capable of adjustment in the direction of the length of the grain as the latter lies on the platform of the harvester in order that the gavel may be bound at or near the center, substantially as set forth." (Vol. 2, Warder Rec., p. 355.)

This claim was amended (apparently to avoid references in the prior art) so as to confine it to "The binder-arm H, capable of adjustment," etc.

The defendants insist:

First. That the only modification, in respect to adjustment, which Gordon made on the prior machines (if any), consisted in so mounting his binder-arm and twister on their actuating shafts that they could be slid longitudinally on them relative to the grain-supporting deck and independently of the supporting frame in which the binding mechanism was mounted, and in connecting these shafts by a sliding shifting- link through which the parallelism of the binder-arm and twister was approximately controlled.

Second. That, as he did not originate the adjustment of the grain-binder with reference to the reaper as a means of centralizing the band, his patent must either be

held invalid for want of invention or confined to the particular means by which he effected the adjustments of the binder-arm and twister, namely, mounting them adjustably on parallel actuating shafts along which they are slid over the deck, and connecting these shafts by the coupling-link or shifter.

Third. That the files of the Gordon application show that he undertook at first to claim the adjustment of the binding mechanism, and that this claim was rejected and withdrawn, and his patent limited specifically to making "*The binder-arm H*" adjustable, as distinguished from making the binding mechanism as a whole adjustable.

Fourth. That the defendants have adhered strictly to the original plan of building the grain-binder and the reaper as independent organizations, mounting them in independent supporting frames, and adjusting them bodily with reference to each other, as claimed in the Watson, Renwick & Watson patent of 1851.

Fifth. That if complainant's patent is not confined explicitly to the exact construction and means of making the adjustment of the twister and binding-arm with reference to their respective supporting frames, it is anticipated by, among others, the Watson, Renwick & Watson patent of 1851, the Watson & Renwick patent of 1853, the Sherwood patent of 1858, and, inferentially, by all the patents which describe a binding machine and harvester as separately mounted and attachable to and detachable from each other.

Sixth. That the claim is invalid for want of invention, in view of the fact that such adjustments are familiar expedients in mechanics and that the purpose and effect of such adjustment had already been stated in the prior patents.

Seventh. That the evidence shows Carpenter to have

invented, and to have had in public use, a machine in which the adjustment was made precisely as in these defendants' machines, before Gordon completed his invention or reduced it to practice, and more than two years before he applied for his patent.

Eighth. That if the Gordon invention were to be treated as covering the independently mounted binders and harvesters, his delay in applying for a patent after the expiration of his caveat would work an abandonment as against methods of adjustment meanwhile used by Carpenter or others.

Ninth. That the Gordon method of adjustment proved a failure, has never gone into practical use, did not contribute anything to the advancement of this art, and contained no suggestions which have been subsequently followed; that the machines which the defendants are making and selling derive their genesis through other and independent sources, and are successful because they do not follow in any respect the plan of the Gordon machine, either in the mode of making this adjustment, or in any other characteristic; and that any construction of that patent which rendered their machines tributary, would have the effect of wresting from them the property which has been developed by the successful inventors under whose patents they have lawful title, and conferring it upon one whose only contribution to the art was a warning against further efforts in that direction.

The opinion of the Circuit Court was as follows:

"Without setting out in detail the facts in the above entitled causes, which were heard together, and in each of which the question is narrowed down to the single point whether the first claim of letters patent No. 77,878, for "Certain Improvements in Grain Harvesters," issued May 12, 1868, to James F. Gordon, is infringed by the attachable and adjustable binding machines used by the

several defendants in connection with this harvester, the conclusions of the court, after a careful examination of the evidence and full consideration of the questions presented, are the following, viz.:

"1st. That in view of the proceedings which took place in the Patent Office before said letters patent No. 77,879 were granted, as disclosed in the file-wrapper and contents, showing that the patentee was required to and did narrow and limit the broad claim of his first application, covering and embracing the broad feature of a binding device or mechanism capable of adjustment in the direction of the length of the grain in order to bind the bundle or gavel at or near the center, by confining and restricting said claim as finally allowed to, 'the binding-arm H, capable of adjustment in the length of the grain, in combination with an automatic twisting device, substantially as and for the purposes set forth;' and in view of the state of the art as shown in the prior patents of Watson, Renwick & Watson, No. 8,083, dated May 13, 1851; of Watson & Renwick, No. 9,930, dated June 6, 1855; of S. S. Harlbut, No. 7,928, date Feb. 4, 1851; of A. Sherwood, No. 21,540, granted Sept. 14, 1858; and of Allan Sherwood, No. 25,308, issued Aug. 30, 1859, said first claim of letters patent No. 77,878, alleged to be infringed by defendant, must be limited and confined to the specific combination embodied therein and described in the specification, including the rake as an element of said combination, and cannot be properly enlarged or broadened as a pioneer invention, as urged by counsel for complainants, so as to cover any and all binding devices or mechanism which are made adjustable to separate and independent harvester machines.

"2. That if not so limited and restricted, said letters patent No. 77,878 were anticipated by the patents above mentioned and therefore void.

"3. That as limited and confined to the specific combination therein described, said first claim of said letters patent is valid, but complainants cannot under said claim invoke in behalf of this patent the doctrine of equivalents or the liberal construction allowed to pioneer inventions, so as to broaden said claim and thereby practically make it cover what the Patent Office had once rejected with the patentee's acquiescence.

"4. That under this view of the proper restrictive construction to be placed upon said letters patent or the first claim thereof, it neither anticipates the S. D. Carpenter patent, nor was it anticipated by said Carpenter patent. Said Carpenter patent and invention embodies the adjustable and independent binding mechanism, such as defendants generally use and employ in connection with their grain harvester.

"5. That the defendants' binding machines, which are entirely separate and independent and distinct from the grain harvesters, although so constructed as to be attached to said harvesters and made adjustable, so as to bind the gavel centrally, do not, when so used, infringe the first claim of complainants' said patent No. 77,878.

"The adjustable feature of certain parts of a single combined machine or grain harvester cannot, in the light of the art as disclosed in prior patents, be treated or regarded as the same or substantially the same thing as are independent binding mechanisms adjustable as a whole, with all its parts fixed and unadjustable, simply because such binding device is used in connection with grain harvesters.

"6. That the bills in the above entitled causes should each be dismissed at complainants' costs, and it is accordingly so ordered and adjudged.

"HOWELL E. JACKSON,
"*Circuit Judge.*
"GEORGE R. SAGE,
"*District Judge.*"

INFRINGEMENT.

Gordon did not originate the plan of moving the binding machines forward and backward on the reaping machine to adapt them to binding centrally grain of different lengths, but undertook to dispense with the independent supporting frames required for such an adjustment. His invention, if there was any, was confined to vesting

the adjustability in the binding-arm and twister, instead of the supporting frame of the binding machine, and spanning the shafts on which the arm and twister separately travel by a sliding link (named in the patent "frame W"), whose office is to propel them simultaneously on their separate tracks, and keep them abreast.

The defendants have mounted both arm and knotter immovably in the supporting frame of the binding machine, excluding the capacity for adjustment with which Gordon endowed them. There is nothing in their machine to correspond to the shifting link, and nothing which that link could propel, if it were introduced. As the arm and knotter can not be pushed backward or forward on their shafts, there is no room for any shifter to communicate a uniform rate of propulsion to them, or prevent them from getting out of alignment during their progress.

If Gordon had been (as he was not) the first to provide for the relative adjustment of the binding and cutting mechanism, to adapt them to bind centrally different lengths of grain, he could hardly have patented more than the particular means by which he made them adjustable. The adjustment of the working parts of a machine to different positions, to correspond to the dimensions of the object on which the tool is to act, or to the particular part of that object on which the operation of the tool is desired, has been an incident in the construction of machinery as far back as the history of mechanism reaches; and, while there may be patents for the particular mechanical construction by which such an adjustment is provided for, there can be no patent covering such adjustability broadly, even where it is new to the particular machine.

As Gordon was neither the first to patent such adjustability for this purpose; nor the first to mount the binder

and harvester in independent frames adapted to be attached to each other and capable of relative adjustment, nor the first to describe the adjustment of the arm and twister along the binder for the same purpose, his patent, if sustainable at all, can only cover his precise mode of giving adjustability to the arm and twister respectively, namely, so mounting them on their actuating shafts that they are severally capable of sliding along those shafts, and interposing a subtending shifting-link, which travels on these shafts and propels the arm and twister at equal pace along their parallel, but otherwise independent, ways. It is because the arm and twister travel on different ways, and would otherwise be capable of different rates of locomotion and different extents of travel, that there is occasion to span their respective courses by this sliding link, which imparts a uniform rate of propulsion to both, and yokes them abreast.

The fact that the adjustment of the binder forward and backward of the reaper, for the purpose of binding centrally grain of different lengths, had long before been patented, and that the contemporary adjustment of the binding-arm and twister along the binding-deck, for the same purpose, had been described as a method of accomplishing the same object, has already been specifically pointed out under the preceding heading, and it is not necessary to repeat the explanatory statement and illustrations of the prior art there made.

Complainants' expert, Renwick, realizing that with the Watson, Renwick & Watson patent of 1851, the Watson & Renwick patent of 1853, and the Sherwood patent of 1858, all mentioning these adjustments for centralizing the band, and with the other prior patents showing the binder mounted in a separate supporting frame bodily detachable from the reaper, the Gordon patent could not

be construed as covering broadly such relative adjustability, has construed into the claim the shifting-link, designated in the patent "frame W;" but he seeks at once, by a kind of jugglery of language, to emancipate that frame from the characteristics upon which its identity depends, and to confound it with the supporting frame of the machine, to which it bears no more resemblance than does the evener or whiffletree of a vehicle to its gearing frame.

It is quite immaterial whether this part "W" is called a frame, or a carriage, or a shifter, or an evener. It is enough that it is something essentially different from the supporting frame of the binding machine; something that performs its office by virtue of moving independently of that frame; something that is itself mounted upon and supported and guided by the actuating shafts which it spans; something that rides on these shafts, instead of carrying them; something that merely pushes the arm and twister to and fro with respect to their supporting frames and the fixed mechanism mounted therein; something that segregates this arm and twister from the binding machine in which they are mounted, and imparts to them as individuals a simultaneous travel to and fro relative to the supporting frame on which their shafts are sustained in fixed relations to each other and to the rest of the machine; something that is itself hung upon the binding machine and upheld by that machine, incapable of upholding the machine or maintaining its integrity, having no office but that of a shifter or evener to preserve the equality of movement between two parts which are sliding on different tracks—a mere link for imparting a similar propulsion to the two elements which are severally driven by it along the two shafts on which it rides.

No ingenuity in confusing terms can convert it into the

solid frame in which the binding machine is mounted. The Gordon machine has, and must have, a supporting frame corresponding to the supporting frame of defendants' machine; the part W is not a substitute for that frame, and would be wholly useless without that frame. It is upon the supporting frame that its existence as an organized machine depends. The shifter can be taken away and the integrity of the machine is not destroyed, but the supporting frame cannot be dispensed with without destruction of the machine. Gordon might have made this supporting frame, including its entire contents, adjustable. If he had done so he would have had no occasion for his "frame W," or for an "adjustable binding-arm," but he would have then been conforming to the Watson, Renwick & Watson patent, from which it was his aim to depart.

He chose, however, to adopt the plan of the Sherwood patent, that of moving the binding-arm and twister relative to the binding platform and to the other mechanism of the binding machine. This he was not entitled to patent, because it was old. The Patent Office seems to have overlooked the Sherwood patent, and complainant's expert, Renwick, now seeks to escape its effect by reading into the claim the shifting-link, marked W, while disregarding the essential character of that device for the purpose of asserting infringement; at the same time he excludes from the claim the rake and other elements upon which the combination is dependent. The only addition which it can be pretended that Gordon made to the Sherwood plan of adjusting the arm and twister consisted in inserting the shifting-link, which, by embracing the shafts of the binding-arm and of the twister, respectively, and sliding upon them, would serve to propel simultaneously the two independently mounted elements which

he wished to adjust. The sliding link, riding on the two actuating shafts, was at most his only contribution toward this adjustment. Whether it distinguished his machine from all which preceded the date of his patent is quite immaterial, since it is certain that it distinguishes it from all which have been sold or put into practical use since that date.

The plan of building the binding machine and the reaper as two separate organisms mounted in independent frames, capable of attachment to and detachment from each other, and of adjustment bodily relative to each other, which was adopted by the earlier patentees some forty years ago, has been strictly adhered to by these defendants and all the successful manufacturers. While it involved the construction of two independent supporting frames, and the movement of the entire ponderous machine instead of merely the binding-arm and knotting mechanism, its advantages in other respects far more than counterbalanced any inconvenience due to the independent mounting of the machine or the moving of the entire bulk.

The Gordon claim is limited in terms to an "automatic twisting device." This limitation may have been introduced to distinguish it from the Watson, Renwick & Watson patent, which described and claimed the lateral adjustment of the binding mechanism to centralize the band, but used a knot-tyer instead of a wire-twister. Defendants' machines have no wire-twisters, but all use knot-tyers, and complainants' expert, Renwick, admits that the Gordon twisting mechanism would not be practically operative in a twine-binder. (Hoover & Gamble Rec., p. 69, A. 32.) The deflection or wabble incident to the adjustability of the binding-arm was sufficiently objectionable in a wire-binder to exclude it from use. It would

be utterly impracticable where a knotter is used instead of a twister, as in a twine-binder, where absolute precision in movement and registration is indispensable, and where the relationship of all parts of the binding mechanism must be preserved and all tendency to disturbance or deflection excluded. The automatic self-tying twine-binder, which the evidence shows began its practical work in the harvest of 1874 (the Gorham binder), depended upon a fixed alignment between the binding-arm and knotter and the mechanism which seized the grain and brought it into binding position. This has been found essential to the successful binder and has been strictly adhered to in the type of binder which has become universal, and which has been built under the Gorham and Appleby patents by all these defendants.

(See Vol. 1, Warder Rec., dep. Shores, p. 146, A. 1–116; dep. Utter, p. 159, A. 1–48; dep. Gorham, p. 165, A. 1–29; "Defendants' Exhibit Model of Gorham's Harvesting and Binding Machine," "Exhibit List of Defendants' Patents," p. and p. 781; also, Appleby Shop Right and Lathrop Shop Right, Hoover & Gamble Rec., p. 17–18.)

Defendants' expert, Quimby, says (Vol. 1, Warder Rec., p. 750 *et seq.*, A. 5):

"The machine shown and described in the Gordon U. S. patent, No. 77,878, is a self-binding harvester of the type in which harvesting mechanisms and binding mechanisms are incorporated together as integral parts of one and the same machine. The relation of these parts in the Gordon machine is so intimate, and they are to such an extent interdependent, that the binding mechanism as a whole cannot be removed from the structure without taking with it a portion of the harvesting mechanism, and if in attempting to separate the two mechanisms the harvester be left intact, the parts removed will not constitute a complete binder. Thus, the reciprocating rake, which rakes the cut grain towards the stubble side of the

platform, where the binding operation is performed, is detained at the conclusion of its raking movement, in order that it may hold the bundle of grain which it has gathered against the binding-wire, until by the fall of the wire-carrying arm the bundle of grain or 'gavel' is encircled by the binding-wire, after which the rake is rocked upward, and carried back and dropped to the grain side of the platform to repeat its raking stroke, and gather up, to form another bundle, the cut grain which has fallen upon the platform since the preceding stroke.

"In the Gordon machine, the rake is a part of the binding mechanism, not because it gathers and moves the grain to the place where the bundle is to be bound, but because it is, as the patent says, 'brought to rest as often as it has completed its effective stroke, in order that it may serve as an adjunct of the binding device in confining the grain within the path traversed by the binding-arm until the latter has completed its descent, and so encircled the gavel with wire.'

"The gavel collected by the rake lies upon an extension of the platform, beneath which is a box or frame containing the twister and its gearing. The prime wheel of the twister gearing is loosely splined upon a horizontal shaft provided with a fixed bearing near the rear of the machine, and projecting forward therefrom through the twister box. Motion to operate the twister is derived from the lever which imparts the reciprocating movements to the rake. Hence this lever, and the mechanism by which it is rocked back and forth upon its axis, are operative parts, both of the harvesting mechanism and of the binding mechanism.

"Between the platform extension or 'gavel receptacle,' where the gavel is bound, and the main frame of the machine, which is supported directly upon the drive wheel, there is an opening through which it is intended that the bound bundle shall fall to the ground. On the side of the main frame toward the platform, there is journalled, in fixed bearings, a rock-shaft which is parallel with the twister driving shaft, and upon which is loosely mounted the arm which carries the binding wire, and which is called in the patent, 'the binding-arm H.' This rock-shaft has affixed to it two crank-arms, the ends of which are united by an elongated crank-pin, which extends

loosely through the binding-arm, and thereby makes the binding-arm partake of the rocking movements of the rock-shaft, upon which it is mounted.

"The first claim of the Gordon patent relates to the expedient by which it is sought to adapt the machine for binding centrally bundles of grain differing from each other in length.

"There was nothing new in the idea of giving to self-binding harvesters this capacity of adaptation. In the machine shown and described in the Watson, Renwick & Watson patent No. 8,083, dated May 13, 1851, in which the binding mechanism was erected upon a vertical frame at the stubble side of the platform, the cutter-bar, carrying the fingers and sickle, was supported at its extremities in horizontal grooves formed in the side sills of the platform frame, so that it could be moved to set it at a greater or less distance from the center of the platform behind it, in order that, by the appropriate adjustment of the cutter-bar, the cut grain, whether long or short, would be gathered into a sheaf and presented to the binding apparatus in such position as to be bound centrally.

"In the Watson, Renwick & Watson patent it was suggested, as an alternative for the adjustment of the cutter-bar, that the binding apparatus should be made adjustable, and although no adjustably-constructed binding apparatus was shown in the drawings, the subject was referred to in the third claim in the following words, to wit:

"'The method of adapting the binding apparatus to the length of the cut grain by varying the respective positions of the cutting and binding apparatus, substantially as herein set forth—that is to say, by moving the front of the platform, with the cutting apparatus, backward or forward, or by moving the binding apparatus nearer to or farther from the front of the platform, in such manner that the sheaf may be bound near the middle of its length, whether it be long or short.'

. . . . . .

"The germ of the idea of adapting the machine for central binding was clearly set out in the Watson, Renwick & Watson patent, and, therefore, in my opinion, the only opportunity for the exercise of invention in the

premises subsequently was in the devising of especial means for carrying out that idea.

"An example of a subordinate improvement in this direction was embodied in the machine shown and described in the Watson & Renwick U. S. patent No, 9,930, dated December 6, 1853. In this machine the cut grain is elevated from the platform to the binder by means of two series of endless bands stretched over two parallel pairs of rollers, the upper pair of rollers being made adjustable in the direction of their length, so that the upwardly travelling grain could be deflected in a slightly diagonal direction either rearward or forward, as the case might require, in order to so present the sheaves to the binder that they would be bound centrally. This mode of carrying out the broad idea of adaptation for binding sheaves of different lengths centrally did not involve the stopping of the machine. In order to move the upper pair of rollers simultaneously, each roller was grooved to receive a shifter, which was operated by means of a worm or screw-bolt and a nut fitted with a hand-wheel, which was within reaching distance from the driver's seat, so that the adjustment of the elevator bands for the purpose of presenting the grain, whether long or short, in such position as to be bound centrally, could be effected by the driver while sitting in his seat on the machine.

"In this machine, fingers were employed to strip the grain from the upper end of the elevator, and the horizontal rod to which these fingers were attached was so connected with the shifter that the fingers were forced to partake of the adjusting movement of the bands. There was thus afforded an example of power exerted from a common source or actuator to affect simultaneously, without stopping the machine, the adjustment of different instrumentalities whose relation to each other required to be preserved, and by reason of whose adjustments sheaves of grain differing in length could be bound centrally.

"The Sherwood U. S. patent No. 21,550, dated September 14, 1858, related to a harvester and binder in which the operation of gathering the grain into gavels and binding it into bundles was partly automatic and partly manual. In the Sherwood patent, the gavel receptacle for the bundle of grain which is to be bound is called 'the concave,' and to this 'concave' the twisting

apparatus and its attachments are fastened. The wire-carrier is an arm rigidly connected with a rock-shaft which is rocked by hand to carry the binding wire around the sheaf contained in the concave, and present the wire to the twisting apparatus. The paragraph next preceding the claims, in the Sherwood patent, is as follows:

"'The twisting apparatus and its attachments may be made adjustable on the concave, for the purpose of bringing the apparatus to about the center of the bundle, whether the straw be short or long. The wire-carrier, of course, must be similarly adjustable, so as to act with the twisting and cutting contrivances.'

"The Sherwood patent, however, does not show nor describe any specific method of carrying into effect the suggestion which I have quoted. It does, however, convey the information that, if the twisting apparatus is to be made adjustable, the wire-carrying binder-arm must be similarly adjustable.

"The expedient devised by Gordon to give his machine the capacity of binding centrally bundles of grain differing in length was somewhat in the line of the suggestion made in the Sherwood patent. It consisted in making the binder-arm movable upon the shaft upon which it was mounted, and in making the twister correspondingly movable with relation to the shaft for giving motion to the twister gear. In order to effect the simultaneous movements of the binder-arm and the twister, Gordon connected the box or frame in which the twister is mounted by means of a bar affixed to and projecting laterally from the twister box or frame to a shifter embracing the binder-arm shaft on opposite sides of the binder-arm. He then linked the shifter to a lever, by swinging which the binder-arm and twister could be simultaneously moved frontward or rearward, as might be desired.

"There was nothing new in so joining two separate instrumentalities that they could be adjusted by a common actuator within reach of the driver's seat, because that had been done by Watson & Renwick for a similar purpose, in the machine of patent No. 9,930, in which, as I have remarked, a common actuating wheel is employed to simultaneously adjust the two upper belt rollers and the stripping fingers; but in the Gordon machine the adjusting movement can be made with reference to, and for

the purpose of, fixing the place where the binding wire shall be applied to a gavel, which has been already collected and deposited in the gavel receptacle. For in the Gordon machine it can be seen where the binding wire touches the gavel, and where the gavel will be encircled by the wire, and if there is occasion to have the binding wire encircle the gavel at some other place, the binding-arm and twisting apparatus can be moved either frontward or rearward, as may be required, without moving the gavel. This advantage is peculiar to the Gordon machine, and is due to the fact that the adjustable binding-arm and twister referred to in the first claim of the Gordon patent are movable, for the purpose of adjustment, independently of the binder-table or gavel receptacle.

. . . . . .

"It is clear from the drawings and specification, that in the Gordon machine the collected gavel or sheaf of grain lying upon the platform extension, or 'binder table,' is the gauge for gauging the range of movement required to bring the binding-arm and twister, and their several accessories and the wire, to 'any suitable point (as the specification says) to bind the sheaf in the center.' This facility of accurate adjustment is due to the circumstance that the binding-arm and twisting device referred to in the first claim are capable of adjusment independently of the gavel receptacle or binder-table upon which the sheaf is deposited preparatory to being bound.

"It is also evident that in the Gordon machine changes of adjustment to insure central binding do not materially alter the balance of the machine, because of the comparatively small weight of the parts whose positions are changed in effecting such adjustment. These parts embrace, in addition to the shifter, the binding-arm and the twisting device which are mentioned in the first claim, and which are made adjustable by being adapted to slide upon the shafts by which they are respectively operated.

"In view of these considerations, I understand that the binding-arm H, and the twisting device of the first claim, must be capable of adjustment, relatively to the binder-table, in the direction of the length of the grain lying upon the binder-table.

. . . . . .

"I find that the characteristic construction of the Gordon machine is that it is a compound machine, composed of cutting mechanism and binding mechanism, which are coalesced so as to form one complex organized whole. The specification in the Gordon '68 patent, after the preliminary statement that 'the invention relates to a certain improvement in that class of harvesters by which the grain as it is cut is bound by the operation of the machine,' continues with the statement that in the machine which is the subject of the invention, 'the rake makes its effective sweep across the platform from the grain side of the same towards the main frame. The grain thus gavveled or bundled is held by the rake, which has an interval of rest for that purpose, against a wire, which is supplied from an elevated reel, and held by grasping devices at a point below the gavel, and which is made to completely encircle the gavel by the descent of a binding-arm and is ultimately cut and twisted so as to firmly and securely bind the grain into a sheaf.'

"In the Gordon machine the cut grain is pushed along the platform to the place where it is to be bound by the reciprocating rake, and a part of the invention consists, as the specification states (*vide* lower part of the first column on page 1): 'In the manner of connecting the twisting device with the rake, so that, while the former derives its motion from the latter, the twisting hook remains at rest as the rake makes the stroke which gathers the grain, said hook being thus permitted to maintain the position which enables it, when rotated, to catch the wire after the same has been passed around the gavel by the the descent of the binding-arm.'

"In continuation, the specification sets forth that another part of the invention consists 'in means for operating the rake, whereby the same is brought to rest as often as it completes its effective stroke, in order that it may serve as an adjunct of the binding device in confining the grain within the path traversed by the binding-arm, until the latter has completed its descent and so encircled the gavel with wire.'

"The specification describes the rock-shaft, upon which the binding.arm is mounted, as having its bearings attached to the frame of the harvester. The binding-arm is so mounted upon the rock-shaft that it can be made to

slide thereon for the purpose of adjustment. The rock-shaft itself is not capable of endwise adjustment.

"The rake is an appurtenance of the harvester, because it is the instrumentality, and the only instrumentality, for getting rid of the cut grain by moving it along the platform to the binding mechanism. The intimate relation of the rake to the binding mechanism is illustrated, not only by the facts that the motion to operate the twister is derived from the rake-operating lever, and the twister is operated with especial reference to the movement of the rake, and the rake is brought to rest to confine the grain within the path traversed by the binding-arm, but by the further fact that the rake lever and the binding-arm derive their motions from the same countershaft, which by means of a clutch, can be thrown either into or out of gear with the main wheel of the machine. The object of this is explained in the second column, on page 2 of the printed specification, as follows, viz.:

" 'Should the grain be sparse, or not sufficiently abundant to supply a gavel as fast as the rake would gather it, under the motions at which the parts are normally timed to operate, the driver can readily, by forcing the treadle *a* downward, throw the rake and binder out of gear, or, in other words, throw the clutch, K, out of the notches in the wheel, M, thus allowing the rake and binder to remain at rest until the machine has moved a proper distance to gather enough grain to form a suitable sized gavel.'

"Finally, the machine has but one frame, upon and about which the various devices composing the harvesting mechanism, and the various devices composing the binding mechanism, are all mounted.

"I therefore find that the structure shown and described in the drawings and specification of the Gordon patent is a single machine, into which harvesting devices and binding devices are incorporated as integral parts, and in which some of the parts belong equally to the harvesting mechanism and to the binding mechanism.

. . . . . .

"Defendants' machine belongs to the type of aggregated harvesters and binders. It consists of an aggregation of two distinct, independent organisms—to-wit, a complete harvesting machine and a complete binding machine.

"The harvesting machine is composed of a substantial frame, in and upon which are erected mechanisms respectively for cutting grain, for moving the cut grain laterally as it falls upon the platform, and for elevating and discharging it over the top of the main wheel, upon which the greater portion of the weight of the machine is supported, together with suitable gearing for transmitting from the main wheel the necessary power to operate these mechanisms.

"The binding machine, or binder, is composed of another frame, in and upon which are erected devices for packing grain into bundles, for compressing said bundles, for applying and tying a cord around the compressed part of each bundle, and for discharging the bound bundles to the ground, together with suitable gearing for transmitting motion to these devices from the prime shaft of the binder. The binder frame is hung to the harvester frame upon the stubble side of the main wheel.

"The various mechanisms belonging to the harvester perform their several functions without any dependence upon any device belonging to the binder; and, similarly, the various devices belonging to the binder are not affected in the performance of their several functions by any dependence upon any mechanism belonging to the harvester, excepting merely that the power to drive the prime shaft of the binder is taken from the harvester gearing, and the grain which is to be bound is received by the binder from the upper end of the harvester elevator. On the contrary, in the Gordon machine the same frame supports both the mechanisms belonging to the harvester and the devices belonging to the binder, and some of the parts in the Gordon machine are necessary appurtenances both of the harvester and of the binder. In defendants' machine the devices for clearing the cut grain from the platform operate continuously, and the operation of the binder is automatically dependent upon the collection in the gavel receptacle of a sheaf of grain of prescribed thickness and density. On the other hand, in the Gordon machine the platform clearing device—to wit, the rake and the binding-arm and twister—are manually thrown out of gear when the grain is sparse, and are simultaneously thrown into gear, to resume the performance of their respective

functions, when the estimated quantity of grain for a bundle has fallen upon the platform.

Again, in the Gordon machine the binding-arm and twisting device are adapted to slide upon the shafts by which they are respectively operated, for the purpose of adjusting the machine for central binding. But to adjust for central binding in defendants' case, the entire binding machine is moved bodily frontward or rearward, in order to bring different parts of the binder opposite the center of the path along which the grain is delivered from the harvester elevator belts.

"The difference in this respect between the Gordon machine and the defendant's machine is analogous to that existing between the adjustable backs of the fixed seats in ordinary railroad cars and the bodily movable chairs which are sometimes used in parlor cars. In both cases the object is to enable the passengers to sit facing in the direction in which the car is travelling. In the ordinary car, the object is accomplished by the employment of the adjustable backs, and in the other case, by the use of bodily movable chairs, the backs of which are not adjustable.

"The expedient for binding centrally in defendants' machine is the embodiment of the suggestion found in the Watson, Renwick & Watson patent of 1851, of a binding apparatus independent of the cutting and raking apparatus, and which is moved nearer to or further from the front, in such a manner that the sheaf may be bound near the middle of its length, whether it be long or short. Defendants' bodily movable binding machine, adjustable frontward or rearward, with relation to the upper end of the harvester elevator, is an inversion of the expedient illustrated in the Watson & Renwick patent of 1853, in which the binding apparatus is stationary, and the upper end of the harvester elevator is adjustable frontward or rearward, for the purpose of shifting the path along which the grain travels from the elevator belts to the binder.

"In the Gordon machine the devices belonging to the binder can not be taken away without dismantling the harvester, or if the harvester be left intact, then what is left of the binding mechanism will not be operative. On the contrary, in defendants' case, the binding mechanism can be wholly detached and removed from the harvester

without in any way affecting the operativeness of the harvester, and, when so removed, it will continue to operate perfectly as a binder whenever it is fed with grain, and power is applied to its prime shaft.

. . . . . .

"I am clearly of the opinion that the defendants' machine does not embody or contain the invention recited in the first claim of the Gordon patent.

"In holding this opinion, I do not lose sight of the fact that defendants employ a binding machine which is adjustable frontward and rearward, with relation to a harvesting machine, upon the stubble side of which the binding machine is hung. But the binding-arm H, of the first claim of the Gordon patent, is a binding-arm which has the capacity of frontward or rearward adjustment, with relation to other parts of the machine in which it is incorporated. It is not so in defendants' machine, in which there is no possible frontward or rearward adjustment of the binding-arm which is not partaken of in an equal degree by all the other members of the machine in which the defendants' binding-arm is incorporated.

"The idea of a harvesting machine, having employed in connection with it a binding machine, adjustable frontward and rearward, for the purpose of varying its position, with relation to the path along which the cut grain is delivered, dates back to the Watson, Renwick & Watson patent of 1851, and the idea of adjustment for the purpose of varying the relative positions of the binding machine and the elevator which elevates the cut grain from the platform and discharges it into the binder, dates back to the machine shown and described in the Watson & Renwick patent of 1853, in which the binding machine was stationary with respect to the frame of the harvester, but in which the upper ends of the elevator belts were made adjustable, fore and aft, for the purpose of giving them the capacity to centrally deliver to the binder either long or short grain.

"In my opinion the transition from Watson & Renwick's elevator belts, adjustable with relation to a stationary binding machine, to defendants' binding machine adjustable with relation to stationary elevator belts, was a very slight one.

"Having in view the prior state of the art, as exempli-

fied by the patents to which I have referred, I understand that the novelty of the structure mentioned in the first claim of the Gordon patent consists solely in the fact that the automatic twisting device and the binding-arm H of that claim possess the capacity of fore and aft adjustment, with relation to all the other parts of the binding apparatus, including the binder receptacle, which, in the Gordon machine, is the platform extension upon which the bundle of grain collected by the rake is deposited preparatory to being bound. As I have already stated, the binding-arm in the defendants' binding machine has no capacity for fore and aft adjustment relatively to the other parts of the binding machine, or relatively to the gavel receptacle or binding table.

"There can be no adjustment for central binding in defendants' machine, except by changing the position of the entire binding machine, including, in addition to the binding-arm, knotter and gavel receptacle, the packing and bundle-forming devices, and the shafting and gearing by which all the parts of the binding mechanism are operated.

"I do, indeed, find in the defendants' machine a binding-arm in combination with a knotter with which it preserves a fixed relation, and, without stopping to point out the distinctive differences between a knotter and a twister, I will consider a knotter and a twister as substitutes for each other. There was, however, at the date of Gordon's invention, nothing new in so combining a binding-arm and knotter as to make them preserve a fixed relation with each other. The preservation of that fixed relation was a necessity, and was a characteristic of the binding mechanisms shown and described in the patents of Watson, Renwick & Watson, Watson & Renwick, and other patents prior to the date of Gordon's. Therefore, Gordon's invention was limited to the particular means he employed to preserve the fixed relation between his knotter and his twister in the machine in which those devices were adapted to slide fore and aft upon the two parallel shafts which operate them respectively. I do not find that defendants' machine contains the invention recited in the first claim of the Gordon patent, because the binding-arm of that claim is a part of a compound machine in which binding mechanisms and harvesting mechanisms are inseparably united, and because the specific

adjustability of the binding-arm and the implied adjustability of the twisting devices referred to in the first claim is in each case of necessity adjustable with reference to all the other parts of the binding mechanism, with reference to the gavel receptacle, and with reference to the frame upon which the various devices embraced in the binding mechanism are erected. The reason why I do not find the invention of Gordon's first claim to be employed by defendants is, that defendants use two distinct machines, aggregated together, but entirely independent of, and capable of separation from, each other; and because I find that in defendants' machine the binding-arm and the knotter are unalterably mounted in the frame of the machine in fixed relation to the packers and to the gavel receptacle.

"Defendants' binding-arm, knotter and gavel-collecting device, and the mechanism which operates them, are parts of a binding machine, while, on the other hand, the binding-arm and the twister referred to in the first claim of the Gordon patent, the gavel-collecting device and the mechanism which operates them, are, in Gordon's case, incorporated into a harvesting machine.

"The Gordon machine is a single mechanical entity in which some of the parts are appurtenances both of a harvesting machine and of a binding machine. Defendants, on the contrary, employ two distinct and separable mechanical entities, the one a harvesting machine and the other a binding machine, which are capable of working independently of each other, and which are merely aggregated together by defendants so that the harvesting machine may be employed simply as a feeder of grain to the binding machine, and to furnish to the prime shaft of the binding machine the power required to operate the binding mechanism.

. . . . . .

"I have carefully examined the record of the proceedings which took place before the Patent Office in connection with the application of Gordon for the letters patent in suit, and I have now before me a certified copy of the file-wrapper and contents in the matter of Gordon's application for said letters patent.

"The prosecution of Gordon's application before the Patent Office evidently took place during the period of

time in which it was customary to make amendments on oral conferences with the Examiner, without making a record of the objections raised by the Office, in the form of correspondence with the applicant.

"It is a fact within my personal knowledge, that such was a common custom, and that the present rule requiring a formal record of the entire action began to be strictly enforced after the date of the Gordon patent.

"The Gordon file shows that the whole specification and claims are extensively interlined with penciled amendments which were plainly the results of conferences with the Examiner, and were based upon objections made by him.

"The original first claim filed with the application was in these words (p. 16):

"'1. Arm H, constructed and arranged so as to be capable of a longitudinal movement jointly with frame W^2, carrying the twisting device, substantially as and for the purposes described.'

"This claim was cancelled.

"It is clear that the amendments and cancellations were actually made or required by the Examiner, because there is an official communication to the applicant, dated the 15th of January, 1868, in which the applicant is directly told that 'the pencil notes on the margin of the specification will explain to the applicant the requirements of the Office.' This communication was signed by the Examiner, and makes it clear that memoranda penciled upon the specification constitute part of the file, and are really the action of the Office in the premises.

"On the first of February, 1868, Gordon cancelled the entire original specification, and substituted a new one, in which the first claim was in these words:

"'1. A binding device or mechanism capable of adjustment in the direction of the length of the grain as the latter lies upon the platform of a harvester, in order that the gavel may be bound at or near the center, substantially as set forth.'

"This was so amended by the Examiner as to eliminate the broad claim to a binding device or mechanism as one of the elements of the combination set forth, and to specifically limit the claim to 'the binding-arm H, capable of adjustment in the direction of the length of the grain.'

The Examiner's requirements were complied with by Gordon, who, on the 6th of February, 1868, substituted a new claim, in precisely the words of the first claim of the patent, to wit:

"'The binding-arm H, capable of adjustment in the direction of the length of the grain, in combination with an automatic twisting device, substantially as and for the purposes described.'

"In view of the practice of the Office at the time, it is obvious, by reason of the Examiner's penciled interlineations in the file, that the applicant was required to limit himself, in view of the prior art, and that he did in fact limit himself, to a binding-arm which was in itself adjustable, as distinguished from an entire binding mechanism which was adjustable."

He is asked (p. 761):

"State whether you find anywhere described, hinted at or suggested in the Gordon patent, that the binder-arm can be adjusted to the cutting apparatus, so as to enable the gavel to be bound centrally, between its ends, otherwise than as is specifically stated in the first claim, in the words: 'Binding-arm H, capable of adjustment in the direction of the length of the grain.'"

He answers:

"I do not. The specification describes only one provision for adapting the machine for centrally binding long and short grain. That provision consists in making the binding-arm and the twisters adjustable frontward and rearward upon the shafts which operate them respectively, and is described with great detail. The subject is first referred to in the third paragraph of the first column on page 1 of the specification, as follows:

"'In the machine the subject of this invention the rake makes its effective sweep across the platform from the grain side of the same toward the main frame. The grain thus gaveled or bundled at the inner side of the platform is held by the rake, which has an interval of rest for that purpose, against a wire, which is supplied from an elevated reel, and held by grasping devices at a point below the gavel, and which is made to completely encircle the gavel by the descent of a binding-arm, and

ultimately cut and twisted, so as to firmly and securely bind the grain into a sheaf.'

"'The nature of my improvement consists, first, in the provision of the binding-arm, which carries the wire around the sheaf, and which, in conjunction with the other devices directly concerned in the binding operation, is made adjustable, so as to bring the wire in position to bind at the center of the gavel, thus suiting the apparatus to grain of any length.'

"The words, 'other devices directly concerned in the binding operation,' refer to the devices contained in and about the twister box or frame, and are the devices for holding, twisting, and cutting the wire.

"At the bottom of the second column of the first page of the specification, where the subject is referred to in detail, there is a reference to the rock-shafts, upon which the binding-arm H is mounted, and it is stated that 'said arm is so fitted to the shafts as to be capable of being moved thereon in the direction of their length.' In the Gordon machine, as I have in substance said, there is a gap between the edge of the platform, where the twister is located, and the drive-wheel frame, upon which the rock-shaft carrying the binding-arm is mounted. It is through this gap that it is intended that the bound bundle shall fall to the ground.

"The binding-arm is made to slide upon the rock-shaft which operates it, by means of a shifter, called in the patent the 'frame W.' In order to make the twister slide to and fro upon the twister-operating shaft, whenever the binding-arm is slid to and fro upon its operating shaft, the shifter, W, is provided with an arm, which extends toward the platform, and is bolted to the box or frame in which the twisting devices are mounted.

"After a description in detail of these parts in the first column of page 2, the specification proceeds as follows:

"'It is known that the length of grain varies much, and in order to make a binder operate practically it should be adjustable, so as to always apply the binding wire to the center of the sheaf; and it is for this purpose that the parts heretofore described are designed.

"'The adjustment is effected as follows: the driver, by moving or oscillating lever N, which connects with frame W, by means of rod m^2 and standard m (said frame W

being so fitted to shaft G as to come in contact with the bearings of arm H), gives the binder and twister, and their several accessories, a longitudinal movement upon the rods G, G^2, which brings them and the wire at any suitable point to bind the sheaf in the center.'

"The specification thus describes fully the construction and operation of the adjustable binding-arm and adjustable twister, but is silent as to any other mode of adapting the machine to bind centrally."

Also, p. 763, referring to Renwick's construction of the claim, he says:

"He interpolates into the claim the frame or shifter W, for shifting the binding-arm when the twister is shifted, and which he calls an adjustable carriage, upon which he incorrectly says the binding-arm and twister are both mounted."

Also, p. 763:

"I do not agree with Mr. Renwick's statement, in folio 460, on page 93, that 'in such machines the grain falls upon the platform . . . with its butts lying but a short distance behind the cutting apparatus.' In this statement Mr. Renwick is, I think, mistaken, because the butts of the grain usually overhang in front of the cutting apparatus. This peculiarity of operation of such machines happens to be especially familiar to me, because during the last harvest I noticed it while studying the operation of a harvester in the field, for the purpose of possessing myself of information which I required, to enable me to complete the draft of a specification for an improvement in harvesters and binders upon which I was then engaged.

"I find nothing to object to in Mr. Renwick's other statements concerning the common variation of the lengths of the stalks of grain, and the desirability of a contrivance for putting the band around the gavel centrally; but I do not agree as to the sufficiency of his statement contained in folio 463 of page 94, that 'the invention referred to in the first claim of the Gordon '68 patent is for the purpose of obviating these difficulties, and in order to understand its advantages and its scope, it is necessary

to have some knowledge of the state of the art which I have partly given.'

"The ground of my objection to this statement is that it permits the inference that Gordon was the first to perceive the desirability of, and to provide means for, binding sheaves of grain centrally. An exposition of the state of the art prior to the Gordon patent, which omits all reference to the cutting apparatus adjustable with relation to the binding apparatus of the Watson, Renwick & Watson patent of '51, and to the third claim in that patent, referring to frontwardly and rearwardly adjustable binding apparatus, and to the upper end of the harvester belt, adjustable with relation to the stationary binding apparatus of the Watson & Renwick patent of 1853, is far too meager to justly show the scope of the Gordon invention.

"I also object, to Mr. Renwick's statement, contained in folio 464, to the effect that in order to get rid of the difficulty arising from the variability in the lengths of the grain, 'Mr. Gordon mounted the binding-arm, as he calls it in his first claim, upon the same carriage with the twister.' The inexactness of the statement that 'Gordon mounted the binding-arm' 'upon the same carriage with the twister,' is not, in my opinion, condoned by Mr. Renwick's subsequent admission, in folios 466 and 467, that 'in the patent the binding-arm is described as mounted on a rock-shaft,' etc. Moreover, the same inexact statement is, in substance, repeated by Mr. Renwick in that part of his discussion of the first claim of the Gordon patent contained in folios 483 and 484, in which he says: 'The invention really consists in mounting a binder-arm and twisting device, in proper relations to each other, upon a carriage.' What the patent says is true. The binding-arm *is* mounted upon a rock-shaft. Mr. Renwick is wrong; Gordon's binding-arm is not mounted upon the same carriage with the twisting device, nor upon any other carriage. It is loosely mounted upon a rock-shaft, which is embraced on either side of the binding-arm by a shifter provided with an arm projecting across the gap between the drive-wheel frame and the platform, which arm is fastened to the box or frame in which the twisting devices are mounted. There is no more justification for the assertion that Gordon's binding-

arm is mounted upon a carriage than there would be in asserting that a belt is mounted upon the belt-shifter which embraces its opposite edges, and by the movements of which the belt is shifted so as to run off from one pulley onto another.

"When Mr. Renwick comes to his description of defendants' machine, he says, in folio 485: 'This machine is provided with a secondary frame or carriage, which carries the tying apparatus as a whole, and is adjusted forward and rearward, and also provided with mechanical devices for moving the adjustable carriage, and lock devices for holding this carriage with its attached binding-arm and tying apparatus in any position to which it may have been adjusted.'

"The use of this mode of describing defendants' binding machine seems to me to account for Mr. Renwick's peculiar language in his description of the Gordon structure. Having previously asserted that Gordon mounted the binding-arm and the twister upon an adjustable carriage, he now refers to defendants' independent binding machine as if it were a part of a single machine. He speaks of the frame of defendants' independent binding machine as a 'secondary frame or carriage,' and as an 'adjustable carriage,' and as a 'carriage with its attached binding-arm and tying apparatus.'

"I do not agree with this description. In my opinion it is misleading. Defendants' binding machine, in and about which are erected the packing arms and compressor, the cord-arm or binding-arm, the knotter, and the shafting and gearing, by means of which all the devices concerned in the binding operation are operated, is not a part of a harvesting machine. Defendants' binder frame is not the mere secondary frame of a harvesting machine, but is an independent frame for an independent machine, wholly distinct and separate from a harvesting machine which may be employed to cut grain, and, by means of its elevator, to discharge the cut grain into the binding machine.

"On page 96 of complainant's printed record, folio 474, Mr. Renwick refers specifically to the Watson, Renwick & Watson patent of 1851, the Watson & Renwick patent of 1853, and other patents which were prior to Gordon's 1868 patent, and again fails to mention that the

idea of adapting machines for binding centrally, and the idea of making the binding apparatus adjustable fore and aft for that purpose, was set out in the Watson, Renwick & Watson patent, and he also fails to mention that the Watson & Renwick patent of 1853 shows and describes a harvester elevator the upper end of which has a fore and aft adjustment, relatively to a binding apparatus, for the purpose of varying the point of delivery of the grain to the binder, in order that it may be bound centrally, whether long or short; and he thus, in my opinion, again fails to make a fair statement of the prior state of the art, such as would afford a basis for a just estimate of the scope of Gordon's invention.

"According to Mr. Renwick's construction, the combination of the first claim of the Gordon patent embraces, as one of its elements, 'a carriage capable of adjustment in the direction of the length of the grain . . . by means of which the twister and the binding-arm are so combined with relation to each other that they always continue in the same relation to each other,' etc.

"The thing in the Gordon machine which Mr. Renwick calls a 'carriage' is the shifter W, having an arm extending across the gap between the drive-wheel frame and the platform, which arm is fastened to the box frame in which the twisting devices are mounted.

"I do not find any fault with Mr. Renwick's calling that thing a 'carriage,' and I do not find any fault with his inclusion of that thing as an element of the combination set forth in the first claim, in justification of which course he has to depend upon what is described in the specification; but I deny his right to import into the claim the condition that it must embrace the thing described in the specification as the 'frame W,' which he calls a 'carriage,' without also importing into the claim the condition that the structure referred to in that claim must in other respects be the structure described in the specification, to wit, a binding-arm, adjustable relatively to the gavel receptacle or binder-table and also adjustable relatively to the rake, which in the Gordon machine is an appurtenance, or 'adjunct,' as the patent says, of the binding mechanism. Even if it assumed that Mr. Renwick's hypothetical construction of the first claim is correct in

the respect indicated in the question, I do not find that defendants' machine infringes the said first claim, because I do not find in defendants' machine the thing, W, of the Gordon machine, which Mr. Renwick calls the 'carriage,' for connecting the twister frame or box with the shifter which shifts the binding-arm upon the rock-shaft upon which it is mounted, and by which it is operated. It is by the use of the thing, W in the Gordon machine, that the twister gearing and the binding-arm are made to slide simultaneously upon the shafts which respectively operate them, by which simultaneous, sliding movements they are both made adjustable relatively to the instrumentality which forms and holds up the bundle, relatively to the binder-table or gavel receptacle in which the bundle rests, and relatively to the frame of the machine in which the binding mechanism is supported.

"Referring to the knotter in defendants' machine, which he calls a 'twisting device,' because in the act of tying a knot it puts one turn in the two parts of the cord which are tied together, Mr. Renwick says, in folio 492–3.

" 'This twisting device is so secured in the carriage of defendants' machine that it always bears the same relation to the binding-arm.'

"He had previously said, in folio 482, in substance, that it is by means of the carriage in complainants' machine that complainants' twister and binding-arm 'are so combined with relation to each other that they always continue in the same relation to each other,' etc. Now I remark in relation to this that in defendants' machine the binding-arm and the knotter are mounted in permanently fixed relations to each other, and in fixed relations to all the other parts of the machine to which they belong. There was nothing new in this at the date of the Gordon '68 patent. Precisely the same thing is true of the binding apparatus shown and described in the Watson, Renwick & Watson patent of 1851, and of that shown and described in the Watson & Renwick patent of 1853, and in other patents of prior date to Gordon's '68 patent. Gordon was not the first to perceive the necessity of providing adjustment for the twister in a machine in which the binding-arm is made adjustable. That information, as I have heretofore said, was contained in Sherwood's patent No. 21,540, dated Sept. 14, 1858.

"I do not agree as to the sufficiency of Mr. Renwick's statement that the defendants' 'twisting device (knotter) is so secured in the carriage of defendants' machine, that it always bears the same relation to the binding-arm, whether the carraige be moved backward or forward', because the fact is that defendants' binding-arm and knotter, and all the other appurtenances of the binding mechanism, are mounted in fixed positions in the frame of the binding machine to which they belong, and are unadjustable with relation to each other, or with relation to the frame of that machine.

"The Gordon '68 patent shows and describes a single machine having but one frame, which serves alike to support the harvesting mechanisms and the binding devices; and in the Gordon machine the rake, which is an appurtenance of the harvester, is also an adjunct of the binding mechanism, as the patent says, and as I have heretofore fully explained.

"I think Mr. Renwick's account of Gordon's machine, and of defendants' machine, is obsure, because it does not sufficiently recognize and point out the fact that, while Gordon employs a single machine in which the harvesting and binding mechanism are integrally incorporated, defendant employs two distinct machines, capable of separation from each other, and each capable, when separated, of being operated for the performance of all the functions for which it is designed; there being no device in defendants' binding machine which comprises any part of, or which performs any function in, the harvesting machine."

Also, p. 767:

"As I have heretofore said, in the Gordon machine, owing to the fact that the binding-arm and twister can be moved for the purpose of adjustment, without moving the binder-table, it results that, at the will of the adjuster, the binding wire can be placed upon any part of a gavel which has actually been collected, there is thus afforded an especial facility for adjusting the binding-arm and twister for the purpose of varying the position at which the binding cord shall be made to encircle the gavel, and the gavel itself is permitted to serve as the gauge by which such adjusting movements may be governed.

"I have also mentioned that, owing to the small weight of Gordon's binding-arm and twisting devices, which are the only parts requiring to be moved, adjustment for central binding is effected by Gordon without materially altering the balance of his machine.

"Defendants' machine does not possess either of these two advantages. The grain, after its delivery from the upper end of the harvester elevator onto the binder deck, moves forward or rearward whenever the binding machine is moved forward or rearward. There is no opportunity for using the collected gavel as a gauge for governing the range of adjusting movement of the binding machine. Such adjustment, in defendants' machine, as a matter of fact, does alter the balance of the machine to a considerable extent, because the binder-table, the cord-arm, the packing-arms, the compressor, the knotter, the shafting and gearing for operating these binding mechanisms, and the frame in which they are erected, all have to be moved fore and aft whenever adjustment to secure central binding is attempted.

"On the other hand, defendants' apparatus possesses certain practical advantages which are peculiar to the type to which it belongs, the characteristic feature of which is that the binder is an independent organism which may be hung upon a harvester, and be driven by power transmitted from the gearing of the harvester, and be fed with grain delivered from the upper end of the harvester elevator, and which, under such conditions of use, is simply so aggregated with a harvesting machine that both the binding machine and the harvesting machine preserve their individualities.

"It is a distinctive capacity of this type of apparatus that the binder complete, with all its operating parts, may be removed from the harvester without, in any way, impairing the operation of the harvester, and, if desired, other devices can be connected with the harvester in place of the binder. Thus, a chute may be hung upon the stubble side of the harvester, and cut grain may be discharged upon the ground upon the stubble side of the main wheel, or another inclined elevator may be arranged to receive the grain discharged from the upper end of the harvester elevator, and carry it upward and drop it into a wagon alongside of the harvester.

"There is, however, another important respect in which defendants' binding machine is, in my opinion, greatly superior in a practical point of view to the binding mechanism shown and described in the Gordon '68 patent, and that is that the binding-arm and the knotter in defendants' machine, which require to be held in exact and proper relation to each other to enable them to operate successfully, are so held by being permanently mounted in their respective places in the binding machine. The shaft of the knotter-bill is provided with fixed bearings, the binding-arm is rigidly fixed to its rock-shaft, and its rock-shaft is also provided with fixed bearings. As these parts are not adjustable, there is, in defendants' machine, no possibility of the lost motion which, in my opinion, must, of necessity, sooner or later, ensue in the practical use of Gordon's machine, owing to the fact that Gordon's binding-arm is loosely mounted upon the rock-shaft which operates it, and is compelled to slide thereon in the act of adjustment by the operation of the thing fastened by its laterally projecting arm to the twister box, and embracing the binder-arm rock-shaft, upon opposite sides of the binder-arm, which thing I call the 'shifter,' and the patent calls the 'frame W,' and Mr. Renwick calls the 'carriage.'

"Q. 16. State whether it would be possible to introduce into defendants' machine, or into any machine of the modern type, in which an independent binding mechanism and an independent cutting mechanism are aggregated together, a 'binding-arm, H, capable of adjustment in the direction of the length of the grain'?

"A. It would not be possible. In the defendants' machine there is no room for adjustment of the binding-arm in the direction of the length of the grain, because of the narrowness of the slot in the binder-deck through which the binding-arm vibrates, and because the plane of its vibration is parallel with and between the planes of motion of the two packer-arms, which are employed to form the gavel, and to initially compress it at the place where it is to be enclosed with the binding-cord."

See, also, cross-examination Quimby, p. 774, A. 20–62.

Complainant's expert, Renwick, is asked in cross-examination (Rec. Hoover & Gamble case, p. 64):

"X Q. 1. To what extent, if any, have you ever operated grain-binders for practical purposes in the field?

"A. I never operated one myself at all.

"X Q. 2. Have you ever seen a grain-binder constructed in accordance with the Gordon '68 patent in operation in the field?

"A. No.

. . . . . .

"X Q. 4. Have you ever seen a full-sized grain-binder constructed in accordance with the Gordon '68 patent anywhere? By full-sized, I mean of size designed for practical purposes.

"A. No."

Also, p. 67:

"X Q. 16. In the defendants' machine there is a distinct frame for the binder, in which are mounted the knotting mechanism, the binder-arm, the packers, the binder table, and all other parts necessary to insure the proper co-operation of the knotting mechanism, the binder-arm and the packing mechanism, is there not?

"A. I suppose by binding table you mean the inclined plane or apron down which the grain slides, and with that understanding, I answer 'yes.'

"X Q. 17. The adjustment to different length of grain, of which you have spoken as existing in the defendants' machine, is effected by moving this entire binder-frame, with all its contained mechanism, with reference to the elevator which delivers the grain from the reaper to the binder, is it not?

"A. Yes, and also with reference to the cutting mechanism and the raking mechanism.

"X Q. 18. In the defendants' machine, the adjustment can not be effected without moving the entire binder-frame with all its contained mechanism, can it?

"A. That is so.

"X Q. 19. In the particulars named in the last two questions, all the machines which you have examined as representing the defendants' manufacture, in the various suits in which you are or have been retained under the patents here in suit, have been substantially the same, have they not?

"A. Yes, with the exception, perhaps, of the McCor-

mick's; I do not remember exactly how the mechanism for driving his binding mechanism as a whole was constructed."

It appears elsewhere that the McCormick binder is built separately and moved bodily like defendants'. (Dep. Baker, Vol. 1, Warder Rec., p. 170, A. 1-86.)

Renwick testifies further, p. 68, Hoover & Gamble case:

"X Q. 22. You do not regard the lever, or any mechanical means for propelling the binder-frame to its different positions, as an essential element of their claim, do you?

"A. That is so; I left the lever out when enumerating the elements of the claim.

. . . . . .

"X Q. 27. Do you know whether any machine made on the plan of the Gordon 1868 patent has ever gone into practical use?

"A. Not of my personal knowledge.

. . . . . .

"X Q. 32. Would the knotting mechanism of the Gordon '68 patent be practically operative where twine was substituted for wire as the binding material?

"A. No; it would not.

. . . . . .

"X Q. 35. In order that the binder shown in the Gordon '68 patent be made complete or practically operative as a binder, is it not necessary to have the rake or its mechanical equivalent as well as the binder-arm and knotting mechanism?

"A. The binder can not act to bind the gavel unless there is the rake or some other instrumentality, whether an equivalent or not, to put the gavel in place; but the rake is no part of the binding mechanism.

"X Q. 36. The rake is essential to the operation of the precise machine described in the patent, is it not?

"A. Yes.

"X Q. 37. Do you find in the defendants' machine any element which you would consider the mechanical equivalent of the rake in the Gordon '68 machine; and if so, what?

"A. No; there is no mechanical equivalent of the rake in all its functions; but there are devices which perform all its duties, namely, the horizontal belt on the platform, which carries the grain across the platform as the rake does, and the packers which shove the gavel onto the cord or wire, and hold the gavel so that the binder-arm may encircle it with the band, which is the last duty performed by the rake in the Gordon '68 machine.

"X Q. 38. So far as you know, were the packers operating in conjunction with the other mechanism, as in defendants' machine, known in 1868 as means of performing the functions they perform there?

"A. I do not remember that the packers operating in conjunction with a spring resistance arm were known as early as 1868. My impression is that they were invented later."

John F. Steward, a practical manufacturer of grain-binders, who had been engaged with their manufacture and operation in the field for many years, says (Vol. 1, Warder Rec., p. 235, A. 57):

"Binders have gone into use in which the principles of operation described and shown in the Watson, Renwick & Watson patent of 1851, and the Watson & Renwick patent of 1853, have been carried out, and such are now manufactured at the rate of between 50,000 and 100,000 per year. Machines have not to my knowledge been rendered practical, and put on the market, embodying the principles of operation shown and described in the patent of James F. Gordon of 1868.

"The principles of the operation of this last machine are impractical, among other reasons, because they are not nor cannot be carried out by devices competent to perform the different functions required. Secondly, such a machine fails to carry out all the requirements necessary in a machine of this class."

After pointing out some of the objections to the Gordon plan of construction, he proceeds (p. 236):

"I find the Watson, Renwick & Watson machine to be a self-raking reaper, upon the frame of which is mounted a detachable automatic binder, said binder being

in the form of an attachment, adapted to be put on and taken off from the said reaper. The binder is mounted upon a frame that may be removed from the machine, and yet the binder retain its ability to operate upon materials supplied to it, and that independent of this reaping machine. So complete is it in itself, that it may be attached to other forms of harvesting machines by the mere use of means for applying power to it from the gearing of the harvesting machine to which it may be attached.

"I do not find in the Gordon patent of 1868 a detachable binder. That machine is not in itself a reaper or harvester provided with a self-binding attachment, but, on the contrary, is, as a whole, a self-binding harvester, as one machine. But one supporting frame is shown and described, and that is adapted to support the cutting and raking devices, and the binding devices, with the gearing for operating the respective parts. No special frame is provided for any parts of the binder, while in the Watson, Renwick & Watson machine of 1851 special framework is provided on which is supported and journalled a single shaft upon which is secured the cams and gearing necessary to operate the parts of the binder in their proper order or time. In the Gordon machine the timing of the movement of the parts is brought about in an impractical manner, the movement of the parts depending, not upon a system of cams and gears, but largely upon each other, while in machines that have gone into practical use, the Watson, Renwick & Watson and Watson & Renwick methods have been adhered to. In the Gordon machine of 1868 the rake is operated by the shaft which moves the needle; and the twister is operated mainly by the movement of the rake.

"Machines have not been, to my knowledge, made to operate successfully in which a rake alone is depended upon to deliver the grain to the band. I have made such machines and have found such delivery was not to be depended upon. In the Watson & Renwick machine of 1853 is shown and described a machine in which the grain is elevated and delivered to an inclined table in a free state; that is to say, it is delivered from the cutting apparatus in the form of a continuous swath upon said table, and there separated into gavels and bound. This principle

of operation is the one solely depended upon by manufacturers of this class of harvesting machinery, it being found to be preferable to operate upon grain in the free state.

"In the Watson, Renwick & Watson machine of 1851, and the Watson & Renwick of 1853, the cutting and delivering apparatus and the binding devices are adjustable, relatively to each other, in order to bind centrally. In the Watson & Renwick machine of 1853 this adjustment is controllable by the driver, from his position in the seat, at will. The constructions shown and described in these machines have all proved practical in the field, and are now used without modification, on all harvesters and binders now in use, the binder being a machine in itself competent to perform all its offices, even when separated from the harvesting machine, and adapted to be put on or removed at will, and to be adjusted along the delivery of the harvester; that is to say, the binding attachment, as a whole, may be applied to the machine in any position to receive the grain that may be desired.

"There is neither shown nor described in the Gordon patent of '68 an adjustable binder, but there is shown and described one in which the needle or band-carrying arm or twister only are adjustable. The needle shaft and twister are each secured, journalled in bearings upon the harvester frame-work, and upon the said shafts the needle and twister may be adjusted.

"Machines have not, to my knowledge, proved practical that have depended upon this method of adjustment. The adjustment of the binder-arm and twister are not practical, because such adjustment does not accomplish the purpose for which a binding attachment is moved. It is found in practice impracticable to move the needle and twister alone on their respective shafts, because of the necessity of the needle being secured to its shaft in a very positive manner. In the forms of machines which have come into practical use, the space provided for the needle is so limited that it cannot be adjusted in order to bind centrally, or for any other purpose. It is found desirable, in binding grain, to place the band upon the bundle in a position approaching centrally, or, more properly, relative to the gavel so as to be somewhere near the center of gravity of the bundle, so that the bound grain may be made

easy to handle in shocking and stacking. Practically, the forward or rearward adjustment of the binding attachment affects the position of the band upon the bundle but incidentally, in the majority of cases. Owing to the various conditions of grain to be operated upon, it is necessary that the devices provided for operating upon the grain received from the elevator must be made adjustable in the direction of the length of the grain. It is equally important that the machines be provided (and they are so provided) with ejecting devices, and that said ejecting devices be also adjustable in the direction of the length of the grain. The adjustment of the devices for seizing the grain, as in machines now in use, is important, because, in order to bind the grain at all, it must be first placed in the receptacle where it is to be bound.

"The condition of the grain which calls for a forward adjustment of the grain-seizing devices (or packers, as they are called), or for a rearward adjustment, as the case may be, calls for the same adjustment of the ejecting devices. I have so far treated these last-named devices separately, because their functions differ; but they are immovably mounted upon, and are a part of, the independent, detachable binding machine.

"It is found that in some fields the grain is not only short, but very light in the straw; and that the heads are advanced upon the platform conveyor more rapidly than the butts, and are delivered into the binder receptacle in a heap at the forward end thereof. It is found to be impractical to move the binding device so far forward as to place the band centrally. Such short grain is oftentimes cut but from six to ten inches in length. In the same field may be found grain four feet or more in length. In order to bind these two lengths of grain centrally, an adjustment of the binding attachment, equal to twenty inches, would be necessary. This is impractical, because the poise of the machine on the master wheel is seriously interfered with. To avoid this, nearly all machines now manufactured are provided with mechanism, generically like that of the Watson & Renwick, adapted to effect the delivery of the grain, more or less, in the receptacle. In nearly all cases this mechanism is adapted to engage the butts of the straws, and force them backward in the receptacle.

"The butter, as it is called, is adjustable at will by the driver to any desired extent; and it is found, in practice, that it alone is competent, in addition to its other offices, to shift the grain, to a sufficient extent, in relation to the band as to fully effect the binding of the grain centrally.

"Grain is often found so entangled at the butts that in order to be received in the binding machine and properly ejected therefrom, the automatic binding machine must be moved well forward. This occurs in a field which is overrun with wild buckwheat or wild morning glories (both running vines), which so effect the entanglement of the straws as only to operate upon them successfully by such forward adjustment. In fields of over-ripe grain, or grain that from any cause is straw-broken, the heads are often found to be so entangled as to require a rearward placement of the automatic binding machine upon the harvester in order that the packers may operate properly thereon, and that the ejectors may force a separation. In long, thin grain, weedy at the butts, the binder must be placed well forward, while in grain of the same length, standing heavy upon the ground, and hence not weedy at the butts, though entangled at the heads, the automatic binding attachment must be placed to the rear.

"This adjustment of the binding attachment to the two extremes of position to operate upon the same length of grain often occurs. Such movement of the binding attachment, of course, affects the position of the band upon the bundle, but such displacement from a central position is not material, because the adapting of the binding attachment to get the grain into and out of the receptacle (to handle the grain, as it is termed) is of the most importance.

"It never has, to my knowledge, been found practical to adapt a self-binding harvester, or to adapt a self-binding attachment for a harvester, to bind centrally by the mere adjustment of the band-placing arm and the band-uniting device. The practical difficulties in the way in a machine of that form of construction, shown and described in the Gordon '68 patent, are, in my opinion, briefly these: The nicety of adjustment of the holding and twisting devices, to which it places the band, can not be maintained. Aside from the mere springing of the binding-arm, which is always likely to take place, the yielding of the connecting

device W will seriously affect the register of the said needle-arm and twister. The said arm and twister are adapted to slide on their respective driving-shafts. Although they might be made to slide freely when freshly oiled, such freedom of movement would not be long maintained, because of the excessively gummy condition which oil exposed upon a surface soon attains, by the accumulation thereon of the dust of the harvest field. This might be in part overcome by mounting the moved parts loosely upon their shafts, but such a remedy would defeat the machine by the lost motion due to such loose mounting, and to rapid increase of the same.

"In the machine shown and described in the said Gordon '68 patent, the twister-shaft is supported in bearings secured to one part of the reaper frame, and the needle-supporting shaft upon another, and the shaft which constitutes the prime mover of the parts of the binder on still another. By the warping of the frame of a machine, which always takes place by the rough movement of the said machine over the ground, these three shafts can not maintain that accuracy of relative position necessary in a grain-binder.

"In the binders which have come into use, the shaft which serves as a prime mover for all the parts of the binder and the needle-shaft, is supported in bearings in a rigid frame, which latter is so freely mounted upon the harvester frame as to not partake of the warping thereof. This is a carrying out of the Watson, Renwick & Watson and Watson & Renwick principle of construction very closely. In the machines so made the two shafts are connected by a single pitman, and hence but two joints for the accumulation of lost motion are found, while on the Gordon machine of '68 there are at least eleven joints between the needle and the twister. Machines with an adjustable binder-arm would further be impractical, because they could not be secured to their shafts loosely enough to be moved, and yet firmly enough to do their work, unless, at least, made excessively large, and hence clumsy.

"The construction shown and described in the Gordon '68 patent, in so far as the movement of the needle relative to the rake is concerned, is not practicable, because

the needle must be in such position as to strike between some two of the teeth of the rake.

"My knowledge of the lack of ability of farmers to operate complex machinery convinces me that it would be unsafe to put in their hands a machine, which, by the misadjustment of its parts, if but for a single time, would work destruction to it. This would take place in case the needle should strike a rake tooth which might be in its path in its downward descent."

See, also, dep. Staley, Vol. 1., Warder Rec., p. 38 *et seq.*, A. 7 and 8.

Where an invention is limited to some adjustment in or modification of a machine, which is in its main features old, any construction of the patent which extended it beyond the specific manner of effecting the adjustment, or the specific nature of the modification, would make it the means of impeding the development of the art, rather than of facilitating it. There are certain adjustments that go inevitably as an incident to any new machine as soon as it is placed in practical use, and if any person who happened to use an adjustment of some impractical machine could rush off and obtain a patent covering broadly an adjustment for that purpose in that class of machinery, so as to prevent those who should make a practical machine with a method of adjustment adapted to that machine from putting such machine into use, the practical development of the art would be speedily arrested by those who were incapable of making a successful machine, by patenting generally the obvious incidents of such a machine, while others were working out to a successful issue the real and difficult problems which such machinery presented. Appreciating this, the Supreme Court has, in its later decisions, limited patents of this character very closely to the specific means of working out the end

exhibited in such patents, and refused to expand them so as to cover other means of accomplishing the end.

See *Wicke* v. *Ostrum*, 103 U. S., 46.
Fay v. *Cordesman*, 109 U. S., 408.
Blake v. *San Francisco*, 113 U. S., 679.
Thompson v. *Boisselier*, 114 U. S., 1.
Sargent v. *Hall Safe & Lock Co.*, 114 U. S., 63.
Thatcher Heating Co. v. *Burtis*, 121 U. S., 286.
McCormick v. *Whitmer, Administrator of Hugh Graham*, 129 U. S., 1.
Weatherhead v. *Coupe*, 147 U. S., 322.

It would be impossible to adhere more strictly to the plan of construction from which Gordon was departing than has been done in the machines of these defendants. They have left him to go his way, which led to failure. They have continued to build on the original plan of Watson, Renwick & Watson, making the binding machine, as a whole, an independent organization mounted in a separate supporting frame, and hence capable of occupying any desired position relative to the machine from which it receives the grain, dispensing with occasion for any adjustability in the constituents of the binder. They have improved the individual machines in many respects but retained the method of centralizing the bind specified in that primary patent. Their machines would literally infringe the third claim of the Watson, Renwick & Watson patent if that were still in force, and would infringe that claim by virtue of identically the features which the court is here asked to find an infringement of a patent granted long after that had expired.

DIFFERENCE BETWEEN GORDON'S METHOD OF ADJUSTMENT AND DEFENDANTS', ILLUSTRATED BY THE CONTRAST IN THEIR HISTORY.

The unqualified failure of Gordon's type of adjustment, its uniform rejection by the public, its abandonement by him after building eight or ten machines, his destruction of these machines without even offering one for sale, the omission of this adjustment from the subsequent machines built by him, and the unanimity with which manufacturers (including those who held an interest in his various patents) have abstained from using it, indicate its fatal inadequacy.

The adherence of patentees and manufacturers for the last forty years to the plan of building the reaper and binder as separate machines, mounted in independently movable supporting frames; the fact that substantially every machine which has been on the market, or gone into practical use, has had a fixed binding-arm and tying mechanism; and the fact that Gordon, after machines relatively adjustable precisely as defendants' are had been put into the field and on the market for years by others, adopted their plan, and subsequently adhered to it, emphasize its vital distinction between the two types.

Gordon, the patentee, testified in behalf of complainants to the effect that he was the first

"to reduce grain-binders to such a state of practical efficiency that the manufacturers of harvesting machines were induced to build them for the trade."

He represented that he was in effect the author of the modern grain-binder, and pointed to the subject-matter of this first claim of his 1868 patent as the supreme invention in the art. He implies that the art stood still some twenty years for the want of this adjustment, and that

the introduction of it was the solution of the difficulties that had laid in the way of automatically binding grain. If the absurdity of this assumption were not sufficiently evident upon the face of it, the history of the art would make it so. There is probably not a mechanic of ordinary intelligence who could not at any time (certainly after such an adjustment was specifically mentioned for the purpose in the Watson, Renwick & Watson patent) have provided several means of making the adjustment, without the exercise of more than the most ordinary mechanical skill, any of them as convenient and effective as that of the Gordon patent. The real problems that had to be solved in making a successful machine related to contriving some efficient and reliable method of separating the gavel from the mass of grain, forming and compressing the bundle, binding it and tying the knot under the difficult conditions presented by the tangled web of grain and the jars and strains to which the machine having to do this delicate work is exposed in operation. For years before the Gordon patent, and for years after it, these perplexing problems continued to absorb and baffle the ingenuity of many successive inventors who had received no help from Gordon, while neither Gordon himself, nor any other manufacturer, has even put his meth- of adjustment to any practical use. The verdict of his own conduct with reference to it, as well as the verdict of the trade generally, rejected it as utterly impracticable.

The cross-examination of Gordon compels him to admit that no machine made in accordance with this patent of 1868 (either in respect to this adjustment, or in respect to other features) has ever been sold or gone into practical use; that he made, during the years of 1868 and 1869, some ten or twelve of these machines, but never tried them in the field after 1869, and never sold any of them,

or offered any for sale, at any time; that nobody has ever sold or put into practical use a machine constructed on this plan, or having this adjustment; that while he continued to build grain-binders after 1869, he never undertook to build one on this plan; that the binders built by him, from the year 1871 down to and including 1874 (during all of which time he was undertaking to build grain-binders) none of them contained an adjustment that would correspond to this patent, even if it was construed as liberally as his expert proposes to construe it; that after the grain-binder built separately, and made adjustable with reference to the harvester, had been in use for many years, and had been extensively put upon the market by others, he had recourse to that plan of construction; that in practice it had always been found "necessary to adjust the binding mechanism with respect to the elevators;" that none of those who owned interests under his various patents, including that in suit, and none of those who held licenses under these patents, had ever manufactured or offered for sale any grain-binder in which the adjustment was made in accordance with this patent; that in 1869 he concluded that it was necessary to contrive some means of applying the binder to the Marsh harvester; that he set to work to do so, being paid for his time by one of the capitalists who had taken an interest in his invention, and that up to 1874 he had not succeeded in getting a machine that could be even offered for sale; that the charge of infringement against the various manufacturers whom he has sued, is confined to the patents embraced in this suit (all of which have been abandoned except the one claim of the patent of 1868); and that all who are charged with infringement of this build their machines separately, after the manner of these defendants. (See cross-examination Gordon, Rec. Hoo-

ver & Gamble case, p. 35, X Q. 42–48; p. 42, X Q. 99; p. 44, X Q. 111–124; p. 50, X Q. 135–136).

Complainant's, as a substitute for evidence showing that this machine ever went into practical use, offered in evidence a newspaper puff, bearing on its face the indication of having been inserted as an advertisement; but the cross-examination shows that this referred not to the machine shown in this patent, or to any machine containing the adjustment of this patent, or any adjustment that, even within the expansive definition of complainant's expert, would be included within the patent, but to an elevator machine without these features, and that none of these machines were sold. He was never able to apply his method of adjustment to any style of binder which ever went into use. (Dep. Gordon, p. 52, Hoover & Gamble Rec., A. 144; p. 44, A- 113–115.)

Gordon adopted the adjustment of the binder on the harvester after the Gorham twine-binder, thus mounted and adjusted, had gone into use, and the Gorham patent been applied for. (Dep. Gordon, p. 45, Hoover & Gamble Rec., A. 115–120; dep. Baker, p. 170, Warder Rec., A. 1–83.)

Complainant also called witnesses to show that in the test made in the summer of 1868, Gordon cut and bound grain with his machine. The significant part of this testimony is that none of them mention having seen the machine adjusted to different lengths of grain, or to have noticed whether it contained that capacity for adjustment. That the machine was not a success is sufficiently indicated by the fact that Gordon and the several capitalists who had invested with him, abandoned it after making eight or ten experimental machines (all of which appear to have been destroyed), and addressed themselves to contriving a machine on an entirely different plan, occupying years in

this endeavor while others were making and selling grain-binders successfully.

But defendants have found more substantial evidence of the nature and outcome of the experiments made with this Gordon machine of the 1868 pattern than is furnished by newspaper advertisements. The Gordon patent issued at a time when the art was ready for a machine of this kind, and there was no difficulty in finding capitalists to take an interest in the patent and invest money in it, or in finding manufacturers to undertake to build the machine. Within a few months after the patent issued, February 11, 1869, a contract was made with Caldwell, Twitchell & Co., manufacturers of machinery in Michigan, giving them exclusive title under this patent for certain territory, and they immediately undertook to manufacture these Gordon machines for the trade. They commenced manufacturing, and, according to John H. Gordon, partly completed five machines. A pattern machine was furnished them by James F. Gordon in June, 1869, and was put into the field under the supervision of John H. Gordon (brother of the patentee, and one of the complainants in this case). Frequent tests were made, all of them proving failures. The machine was demonstrated by these tests not to be a practical harvesting machine so completely that Gordon acquiesced in its abandonment, and turned the machine over to Caldwell, Twitchell & Co. for what it was worth as old iron. The sample machine, as well as those they had partially completed, was broken up, and that ended the manufacture not only for Caldwell, Twitchell & Co., but for Gordon. This was the last that was ever seen of the Gordon machine of this type, and Gordon undertook then to get up a different machine, of which he was to furnish them a pattern when it was successfully operative, but he never furnished them such pat-

tern machine. (See dep. Caldwell, Vol. 1, Warder Rec., p. 741, A. 1–38; dep. Wolf, p. 741, A. 1–17; Defts. Ex. Caldwell, Twichell & Co. Contract, Vol. 2, p. 380.)

Caldwell testifies as follows (Vol. 1, Warder Rec., p. 742, A. 5):

"In the year 1868, late, or the fore part of 1869, we entered into a contract with James F. Gordon, by his attorney, John H. Gordon, to manufacture self-raking and binding harvesters, under patents of James F. Gordon. My recollection is that the patent was dated in 1868. I couldn't say whether there was more than one patent or not. The contract was in writing, and I will produce the original paper, to be attached to my deposition. I forgot to bring it with me, but it will be here in a short time.

> "[Defendants' counsel here offers the instrument referred to in the last answer in evidence, to be marked by the notary as soon as produced: 'Defendants' Exhibit, Caldwell, Twitchell & Co.'s Contract.']

"Q. 6. What was done under this license?

"A. We received patterns from Rochester, furnished by James F. Gordon, by their order, from which to build the machine; we went on and fit up the patterns, and had under way the construction, to my recollection, ten or a dozen of the machines. We were very anxious for to get one or more of the machines into the harvest of 1869, to test its practicability. One of the parties that was interested in the machine, fearing that we might not get the machines we were building completed in time for that harvest, ordered a machine from James F. Gordon, from Rochester, to be shipped there for use in that harvest. That machine came there the last days of June, 1869, and was put in the harvest. In the meantime, we had got several of the machines pretty well under way, and, as I recollect it, one of the machines went into harvest on the farm of Mr. Amos Wolf. I may be mistaken as regards whether the machine that went to Mr. Wolf's farm was built in Three Rivers, or whether it was the machine that came from Rochester. I know that one of the Gordon harvesters was taken to Mr. Wolf's farm in the harvest of 1869, and was tried in the harvest two

or three different times. After the first trial, there were some alterations made to remedy some defect that we thought we had discovered in the machine. After the second or third trial we abandoned the idea of making the machine work in Mr. Wolf's harvest, as his farm was four or five miles out of town. We then procured from Mr. Otis Arnold, whose farm adjoins the village, the privilege of giving it a trial in his wheat harvest. The machine we took to the Arnold farm, I am positive, was the machine that came from Rochester. The party from whom the Rochester machine was ordered lived some ten miles from Three Rivers, and after the trial of the machine on the Wolf farm, was not willing to take the machine and pay for it until the machine had further test. The machine was taken into the Arnold harvest and given trial there, which was not satisfactory. It was then taken back to the shop to have some alterations made, which was done under direction of John H. Gordon. At the same time, we contracted with Mr. Arnold to allow a piece of his wheat harvest to remain until we could make such improvements or alterations as was desired. I think the time between the first trial on the Arnold farm and the second was two or three weeks, as the last trial occurred in the latter part of the month of July—later than the natural time for finishing harvest. We paid Mr. Arnold for the damage that was done in allowing his crop to stand until the machine was ready to try again. After the second trial of the machine on the Arnold farm, I and my partners became satisfied that as the machine was then constructed, it was not a practical harvesting machine, to do practically the work designed, and that for the interest we had in it, we did not propose to spend any more money in the construction of the machines; that if they succeeded in making it practical, we were ready to go on and build the machines as we had contracted. I think that Mr. John H. Gordon was of the same opinion. He had been with us during the trial of the machine at Arnold's, and the alterations were made made under his supervision and direction. He turned over to Caldwell, Twitchell and Co. the harvester that had been forwarded from Rochester, for what it might be worth for old iron. We were so convinced of the impracticability of the ma-

chine, that we broke up the machines under way of construction, and also the patterns that we had fitted up from which to build the machines. That ended the manufacture, as far as we were concerned, of the Gordon self-binder.

"Q. 7. Did you ever sell any of those machines?

"A. No, sir.

"Q. 8. Did you continue in the manufacture of other agricultural machinery after you abandoned these machines?

"A. Yes, sir.

"Q. 9. Had your firm been engaged in the manufacture of agricultural machinery prior to the time you took this Gordon license?

"A. Yes, sir.

"Q. 10. What kind of grain, and in what condition, was that on which you tried this machine?

"A. Wheat, and in good condition for harvesting.

"Q. 11. About how much was cut in the aggregate during the three several trials which were made on the Wolf farm?

"A. I could not tell exactly, but I know we did not get once around the field, which contained from ten to twelve acres.

"Q. 12. Do you mean that in the three trials collectively you did not get once around the field?

"A. Yes, sir.

"Q. 13. About how much was cut on the Arnold farm?

"A. Well, I couldn't tell. Perhaps an acre. There were cut there that on the other—at different times.

"Q. 14. About how much money did you sink in that enterprise?

"A. I think, in money, about two thousand dollars.

"Q. 15. Look at the instrument I now hand you, and state what it is.

"A. It is a contract to furnish the James F. Gordon machine. The signature of the firm of Caldwell, Twitchell & Co. is upon it, and it was executed about the time of its date.

[The instrument last above mentioned is here offered in evidence, and marked 'Defendants' Exhibit Caldwell, Twitchell & Co. Town License.']

"Q. 16. Look at the instrument now shown you, and state whether this signature is that of your firm, and whether it was executed on or about the date it bears, and in the regular course of business.

"A. That is the signature of the firm, and was executed about the date it bears, and arose out of the transaction with the Gordon harvester contract.

[The instrument last above referred to is offered in evidence, and marked 'Defendants' Exhibit Caldwell, Twitchell & Co. Machine Contract.']

"Q. 17. Can you state whether or not other contracts similar in general terms to these last two exhibits were executed by your firm, about that time, with other parties than those recited in these instruments?

"A. There were other contracts of a similar nature.

"Q. 18. Were any of these contracts carried into execution?

"A. We never delivered any machines, and we were never called on for any. We had some machines we would have been glad to deliver.

"Q. 19. Is Mr. Twitchell, of your firm, still living?

"A. He is not.

Cross-Examination by Mr. Cowen.

"X Q. 20. Are you sure that the trials of the machines that you have mentioned was in the year 1869?

"A. Yes, sir.

"X Q. 21. How do you fix that date?

"A. From books in my possession.

"X Q. 22. What books?

"A. Books that belong to the company of Caldwell, Twitchell & Co.; accounts and memoranda.

"X Q. 23. Did you look them over with a view of giving testimony in this case?

"A. Yes, sir.

"X Q. 24. Was John H. Gordon stopping at Three Rivers that summer?

"A. He was at Three Rivers during the trial of the machine at Mr. Arnold's. I am not sure that he was present at the trial on Wolf's farm.

"X Q. 25. Was he present at both trials at the farm of Mr. Arnold?

"A. To the best of my belief he was.

"X Q. 26. Do you recollect that he was?

"A. I recollect his being present at the first trial, and heard him give directions for the alterations in the machine. It is my impression that he was. He was there during the alteration of the machine, and I think he was there during the trial of it.

"X Q. 27. Did I understand you to say in your direct examination that you did not know under which of the Gordon patents these machines were made?

"A. I think, in my direct examination, I said that I did not know whether it was patent or patents; whether there was more than one patent.

"X Q. 28. Do you know under what patent or patents the machines which you saw in the summer of 1869 were constructed?

"A. My recollection is that it was dated May, 1868.

"X Q. 29. Where do you get that information?

"A. From papers that we had from Mr. Gordon.

"X Q. 30. To what papers did you refer in your last answer?

"A. Contract with Mr. Gordon.

"X Q. 31. Any thing else?

"A. I don't recall any thing further else; there was a plate on the machine.

"X Q. 32. Then you did not read Mr. Gordon's patent at that time?

"A. Well, my recollection is that I had an opportunity; whether I read it or not, I couldn't say. I think he had such papers.

"X Q. 33. Do you now recollect that you have ever read the letters patent granted to James F. Gordon, dated May 12, 1868?

"A. I couldn't say that I ever read them myself.

"X Q. 34. Then you do not know of your own knowledge what is described in the specification of that patent, do you?

"A. I could not say at this time.

"X Q. 35. Then you cannot say, can you, that the machines which you saw tried in the summer of 1869 were made according to the description in the Gordon patent, dated May 12, 1868?

"A. No, sir; I could not.

Re-Direct Examination by Mr. Parkinson.

"R-D. Q. 36. Can you state whether the Gordon machine to which you have referred had its binding-arm adjustable or movable along its shaft to adapt it to different lengths of grain?

"A. It had.

"R-D. Q. 37. Please look at 'Complainant's Exhibit Model Gordon '68 Patent,' and state, if you can remember, whether or not the Gordon machines to which you have referred were constructed substantially as illustrated by that model.

"A. They were; that is a *fac-simile* of the machine, as near as may be. It was built on a larger scale."

Wolf testifies as follows (p. 747):

"Q. 3. Did you ever know anything about a self-raking and self-binding harvester purporting to be made under a Gordon patent, being manufactured or operated in your neighborhood; if so, state when and what you knew about it?

"A. In regard to the machine; there was a machine so-called tried upon my farm some seventeen or eighteen years ago, and it proved a failure.

"Q. 4. Can you explain how the machine happened to be tried upon your farm?

"A. I was in the village of Three Rivers, and met Mr. Caldwell, of Caldwell, Twitchell & Co., and he wanted I should go in with the firm to build a self-binding machine. I told him that I could not undertake any such thing without knowing something about its being successful. He stated to me that I could take the machine in my harvest and cut my grain, and have the use of the machine and see how it worked. Then I would tell him whether I would go in as a partner or not, or words to that effect. I went down to the village and got the machine.

"Q. 5. About how long before harvest did you have this conversation with Mr. Caldwell?

"A. Well, I could not say. It was just a short time; only a few days; didn't exceed two weeks.

"Q. 6. Was that machine tried on your farm?

"A. Mr. Caldwell tried their so-called machine on my farm.

"Q. 7. Did he try it more than once there?

"A. Three different days he was at it.

"Q. 8. What was the result of these trials?

"A. It did not work.

"Q. 9. How much grain was cut in these three trials?

"A. To my best remembrance they had travelled about eighty or 100 rods with the machine in the grain.

"Q. 10. Did they get once around the field in the three trials?

"A. No, sir.

"Q. 11. About how large was the field of grain?

"A. About ten acres.

"Q. 12. What kind of grain and what condition of grain was it?

"A. It was wheat; and in good condition for harvesting.

"Q. 18. What was done with the machine after these trials?

"A. They took it to Three Rivers.

"Q. 14. Had you any arrangement with Caldwell, Twitchell & Company, about who should return the machine?

"A. I had an arrangement with Mr. Caldwell, that if the machine worked I should return the machine to Three Rivers; if not, I could let it stand in the field. If it worked, I was to cut my harvest with it and then return it.

"Q. 15. How was the balance of your harvest cut that year?

"A. An old self-raking machine.

"Q. 16. Did you have any thing further to do with this self-binding harvester?

"A. No.

"Q. 17. Do you know whether changes were made in this machine between the different trials on your farm?

"A. There were."

James H. Gordon, subsequently called as a witness for complainant, does not undertake to deny that this machine was abandoned with his acquiescence. He is asked (Vol. 1, Warder Rec., p. 735):

"Q. 27. What was done with this machine after this trial?

"A. My recollection is, that it was sent back to Three Rivers. I believe that they claim that they broke them all up there for old iron; about three years afterward, I think, when they broke them up. It might have been later than three years that they broke them up.

"Q. 28. Did you make any more machines of this pattern?

"A. I did not.

"Q. 29. Did they at Three Rivers?

"A. I don't think they did, and I don't think that my brother made any more after 1869. So far as I know, there were no more machines of this pattern made after 1869."

Also, p. 737:

"X Q. 38. Were any of the machines made in accordance with the 1868 patent here in suit after 1869?

"A. I don't think there were any made in that style after 1870.

"X Q. 39. Were any made of that style after 1869?

"A. I don't think there were after the summer of 1869; that is my recollection of it.

"X Q. 40. Were any of the machines made in accordance with the 1868 patent ever sold to users; if so, how many, when, and to whom?

"A. I don't think any of them were sold or offered for sale. They were experimental machines exhibited and sent to fairs.

. . . . . .

"X Q. 46. Have you ever known of any grain-binder to be sold to a user, in which the adjustment to bind centrally was effected by sliding the binder-arm and twister simultaneously along their actuating shafts by means of a connecting-arm or frame extending from the binding-arm shaft to the twister-shaft, while the binder-deck and the frame in which the binder-shaft and twister-shaft were mounted both remained stationary?

"A. I can't think of any now.

"X Q. 47. Have you known of any such machines to be built since 1869?

"A. I can't think of any now.

. . . . . .

"X Q. 50. When did either you or your brother, James F. Gordon, first sell a grain binder to a user?

"A. I sold the first that I sold to McElroy, in June, 1874.

"X Q. 51. So far as you know, had any of your brother's manufacture or your own manufacture been sold prior to that McElroy machine?

"A. I don't know whether he had sold any or not. He had several in Canada, and I don't know if they were sold or not.

"X Q. 52. It was the year after the sale of the McElroy machine that your brother sent those machines to Canada, was it not?

"A. My recollection is that it was either 1874 or 1875 that he shipped a couple of machines to Canada, but whether he sold them or not I don't know."

The McElroy machine which Gordon refers to as the first sold, was one which did not have the adjustment of the patent, even if construed broadly as complainant's expert construes it. (See dep. Gordon, p. 737, X Q. 42.)

Gordon claims that when Caldwell, Twitchell & Co. abandoned the manufacture of the 1868 style of machine, he was to send them a grain-binder adapted to the Marsh harvester, but has to admit that he never sent them such a machine. (p. 739, X Q. 62.)

Baker, who had been foreman in McCormick's Reaper Works since 1866, and had extensive practical experience in building and testing grain-binders, testifies that he has never known of any machines having the Gordon type of adjustment going into practical use or being put on sale, and that such machines would not be adapted to practical use. (Dep. Baker, Vol. 1, Warder Rec., p. 181, A. 75–79.)

Steward, who has been for many years engaged in building and testing such machinery for the Deering Company, testifies to the same effect. (Dep. Steward, Vol. 1, Warder Rec., p. 253, A. 71–73.)

Complainants' expert, Renwick, who claims to have exceptional familiarity with reaping and mowing machines and grain-binders, admits he never saw a full-sized machine having the adjustment made as in the Gordon patent. (Dep. Renwick, Complainants' Rec. Hoover & Gamble case, p. 65, X Q. 4.)

Louis Steward, who had been engaged in the manufacture of Marsh harvesters (harvesters of the elevator type, similar to those used in modern grain-binders) from 1861 to 1876, testifies to having seen Gordon's machine tested at Faribault in 1873 (the one referred to in the newspaper puff introduced in behalf of complainant). He is asked (Vol. 1, Warder Rec., p. 199):

"Q. 16. Could that machine be adjusted to bind long and short grain centrally; and if so, how?

"A. I should say no; not by any practical means.

"Q. 17. What was it necessary to do in order to adapt the machine to bind grain of different lengths?

"A. It was necessary to readjust the platform, binder-arm and knotting apparatus.

"Q. 18. How could the binder-arm and twisting apparatus be adjusted?

"A. By relieving a set-screw and moving the arm on a shaft, using care to adjust the arm longitudinally and vertically upon the shaft, forcing up the set-screw to keep it in position.

"Q. 19. How could the set-screw be forced up to keep it in position?

"A. With a wrench.

"Q 20. After the set-screw had been forced up to keep it in position, what other change had to be made?

"A. The twister had to be adjusted longitudinally in the same manner.

"Q. 21. After the binder-arm and twister had been moved longitudinally, what other change was it necessary to make?

"A. To transpose and readjust the slats in the platform."

Also (p. 200):

"Q. 28. Did you have any conversation with James F. Gordon, on this occasion, as to the manner of the adjustment of the machine to bind long and short grain?

"A. Yes.

"Q. 29. What was it?

"A. I insisted that he should find a more practical method of adjusting the binder.

"Q. 30. What reply did he make?

"A. Well, he insisted, in a general way, that it was not necessary, first; secondly, that the method was practicable.

"Q. 31. What statement, if any, did James F. Gordon make to you, on this occasion, as to any other method or plan he had of adjusting this machine to bind long and short grain centrally?

"A. Not any.

"Q. 32. When and where did you next see James F. Gordon with a harvesting and grain-binding machine in the field?

"A. In the harvest of '74, near Plano.

"Q. 33. Was this the same machine you saw at Faribault, or a different one?

"A. Substantially the same.

"Q. 34. Was this machine you saw near Plano, in the harvest of 1874, provided with the gavelers which were upon the Faribault machine?

"A. Yes; substantially the same.

"Q. 35. Please reflect a moment, and state what sort of a binder platform the machine you saw near Plano had.

"A. It was a slatted platform, inclined somewhat. The slats were built with an angle to them."

Also (p. 202.)

"Q. 43. Did you see this machine which James F. Gordon brought to Plano during the harvest of 1874 operate in the field?

"A. Yes.

"Q. 44. About how often?

"A. A hundred times, more or less.

"Q. 45. About how long did he have it there?

"A. About six weeks.

"Q. 46. Did you see it adjusted to bind long and short grain?

"A. Yes.

"Q. 47. How was this adjustment made on that machine?

"A. Substantially in the manner described in the Faribault machine.

"Q. 48. Did you make any statements to James F. Gordon during the time he was operating this machine near Plano, Illinois, as to the practicability of the method of adjusting this machine to bind long and short grain; and if so, what were they?

"A. Yes, I objected to the method, because it required too much time and skill for the farmer to adjust it.

"Q. 49. What reply did he make to this statement, if any?

"A. Well, he insisted in a general way that I was wrong about that.

"Q. 50. What statement, if any, did he make in regard to any other plan or mode he had of making the adjustment?

"A. Not any.

"Q. 51. What did you have to have in the field in order to make the adjustment to bind long and short grain centrally?

"A. A screw-driver, wrench and hammer."

Gordon seems to have fully realized the worthlessness of the method of adjustment which he had provided, and to have understood that it must be excluded from his subsequent machines. Meanwhile, other builders of grain binders had proceeded upon the Watson, Renwick & Watson plan of making the machines bodily movable relative to each other, without the slightest idea that in so doing they were making an invention. Carpenter (who, according to defendants' evidence, operated his machine in the field as early as 1863, and, according to complainants' evidence, not later than 1865) built his binder and his harvester in separate frames, hanging the binder frame on the harvester frame, so that it was movable in slots to

adjust it to bind centrally, precisely as is done in the modern machines. The date conceded by complainants' witnesses is long prior to the time when Gordon began to build his first machine, and I shall, for the purposes of this case, disregard the evidence which assigns the Carpenter binder, as a practically operative machine, an earlier date than 1865. Carpenter continued to have this machine in the field each season down to 1870 or 1871, and shortly after sold his patent to the McCormick Company. His patent was issued in December, 1868, describing this adjustment as one of the incidents of the machine. Draper had such a machine in 1871. Locke begun building harvesters and grain-binders of this type (relatively adjustable after the manner of the defendants') in 1871; had one in the harvest field in 1872; begun selling them in 1873, exhibited them at the Vienna Exposition the same year, and sold them in quantities from that time on—that is, for some years before any grain-binding machine purporting to be made under any of the Gordon patents was ever sold. (Dep. Locke, Vol. 1, Warder Rec., p. 55, A. 1–87; dep. Cameron, p. 120, A. 1–65; dep. Cook, p. 126, A. 1–47; dep. Moffitt, p. 131, A. 1–71; also, evidence as to Carpenter machine, cited under next heading.)

The Carpenter machine and the Locke machine were both *wire* binders—in this respect resembling Gordon's and differing from defendants'. These wire-binders (brought out by different manufacturers with various modifications of construction, but mounted and adjusted in substantially the same way) occupied the field until superseded by the automatic twine-binder—a machine which was only possible through a complete avoidance of the Gordon plan of adjustment. Invariability in the line of action of the binder-arm and tying mechanism relative to

the elements constituting the binding receptacle, and confining the grain in its approach thereto, and relative to the mechanism which brings the grain into binding position and forms the gavel, was a fundamental condition of success in these machines, and has been uniformly adhered to in all successful twine-binders. Moreover, these machines had necessarily such complexity of construction, and required such nicety of operation, that any adjustment of the binding-arm and knotter backward and forward of the machine in which they are mounted, or any change of position relative to the platform on which the grain is bound, would be impossible; and any movement of an interposed "frame W" would be equally impossible. They have always been made as independent machines, sold as separate machines, and simply hung on the harvester frames in eyes, slots, or grooves, so as to be placed as far forward or backward as might be desired, and moved from place to place as desired. The Gorham and Appleby patents under which they are built are found on pages 204 and 275, respectively, of Vol. 2, Warder Rec. The early history of the Gorham binder, as used both with the binder bodily adjustable on the harvester and with the adjustable apron, partly appears in the testimony of Shores (p. 146, Vol. 1, Warder Rec., A. 1–52; p. 164, A. 1–12), Utter (p. 159, A. 1–48), Gorham (p. 165, A. 1–58), McGregor (p. 286, A. 1–31), Roberts (p. 289, A. 1–11), Craig (p. 290, A. 1–8).

Complainants have introduced evidence to show that several manufacturers took licenses or shop-rights under the Gordon patents, but these all included numerous patents not involved in this controversy, and it is significant that none of the manufacturers who took these licenses ever built in accordance with this 1868 patent, in respect either to this adjustable feature or to other characteristics

of the machine. Complainants called Lewis Miller, of the Buckeye Companies, to testify to holding a license under the Gordon patents. It is a general license under numerous patents, and he has to admit, in cross-examination, that they are building only two types of machines: one, a twine-binder built under Appleby patents, which is adjusted just as shown in the Gorham and Appleby patents, the other a binder of similar construction, called a "low-down," because mounted below the usual level, in which no adjustment of either binder or binder-arm is made. The fact that, having the right to make this adjustment without royalty, they build their machines without it, speaks stronger than mere testimony as to the worthlessness of the Gordon adjustment. (See dep. Miller, Vol. 1, Warder Rec., p. 584, X Q. 28–35; p. 592, X Q. 116–127; p. 594, A. 128.)

Complainants are undertaking, after the Gordon patent has expired, and after the provision for adjustment which he made has been demonstrated an absolute failure, to *reissue* that patent by judicial construction, so as to cover all the successful machines which have been developed from independent sources and which have been successful because they were not constructed or adjusted on the Gordon plan. By this method of reissue they undertake to cover an art which this patent did not help to advance, and to avoid the surrender of this patent for its past term, which would be a condition of a statutory reissue. Every objection which the Supreme Court has recently pronounced against reissuing patents that were failures, to cover up intermediate inventions which were successes, applies with cumulative force to any expansion of this patent by judicial construction to cover different devices than those which it has introduced.

ANTICIPATION.

If Gordon's patent were construed as covering a binding machine mounted in an independent frame which (including the binding-arm and twister or knotting mechanism fixed therein) is "capable of adjustment in the direction of the length of the grain," it would be anticipated in terms by Watson, Renwick & Watson, who had patented such an adjustment for the precise purpose of binding centrally grain of different lengths; it would also be anticipated by every independently mounted grain-binder patented during the twenty years preceding, if used as described by Watson, Renwick & Watson, for all were, by virtue of being separately mounted, capable of independent adjustment in this respect.

Thus construed, this patent would cover Carpenter's machine, which was, according to complainants' evidence, in the field not later than 1865 (and according to defendants' evidence still earlier), and continued in the field every season until after it was patented, and which, so far as the method of adjustment is concerned (being that covered by the Watson, Renwick & Watson patent), has been in the field every season since, while Gordon's first machine that was ever tested in the field was not begun until 1868, and his last was abandoned in 1869.

If it is construed as covering the binding-arm "capable of adjustment in the direction of the length of the grain in combination with an automatic twister," for the purpose of binding centrally grain of different lengths, irrespective of the precise mode of providing this adjustment, it is anticipated in terms by the Sherwood patent of 1858, in which this adjustment for this purpose is described.

If it is construed as for the particular means of conferring this adjustability described in his patent, it is quite

immaterial whether this was either original or patentable, since it has never been adopted by anybody, not excepting Gordon and his licensees; but the adjustment of a tool or mechanism to bring it to any desired position relative to the material upon which its work is to be performed is so common an expedient, and a sliding support so familiar a means for securing it, that there would appear to be no invention in applying it to the binding-arm and twister of a grain-binder.

That an adjustment to bind centrally was desirable, and was to be effected by placing the binding machine forward or backward relative to the cutting apparatus, was so obvious that it did not escape the attention of the pioneers in this class of invention. They seem, all of them, to have proceeded on the theory that, when such an adjustment was mentioned, and the purpose of it stated, no mechanic needed to be told more particularly how to make it. When we remember that it was already, in the time of Watson, Renwick & Watson, old to mount the binder and harvester on separate frames, capable of attachment to and detachment from each other, and that this continued to be the ordinary method of construction down to the time the Gordon patent (as it has been ever since); that the Watson, Renwick & Watson patent itself speaks of making the binder so separable that it can be mounted on different harvesters and either communicate power to the harvester or derive power from it, and shows and describes the ordinary mechanical means of making two bodies adjustable relative to each other (namely, making the movable part, which, in the form shown, is the cutting apparatus, slide backward and forward in grooves): it seems clear, beyond all dispute, that no skilled mechanic, no mechanic of even ordinary intelligence, needed further instruction to enable him to make

the one machine adjustable with reference to the other. There were many ways in which this could be mechanically carried out, the most obvious one being shown in the Watson, Renwick & Watson patent, and adopted by these defendants, namely, making the movable section slide in a groove (or its equivalent, an eye) on the stationary part. It would have been passing from the province of a patent in disclosing an invention so as to be available to mechanics, and entering upon the province of the mere mechanic, for Watson, Renwick & Watson to have loaded down their patent with descriptions of the different mechanical means of providing for the adjustments which they refer to. They illustrated one mode of making this adjustment when the binder was made the stationary machine, and the cutting apparatus movable relative to it. They then stated that

"in place of making the cutting apparatus adjustable with respect to the binder, it may be advantageous in some cases to make the latter adjustable with respect to the former,"

and claimed in terms, as alternative methods of making the adjustment for this purpose,

"by moving the front of the platform with the cutting apparatus backward or forward, or by moving the binding apparatus nearer to or farther from the front of the platform, in such manner that the sheaf may be bound near the middle of its length, whether it be long or short."

They were, as already stated, familiar with the prior Heath patent, which described the binding machine as mounted in a separate frame, and deriving its power "from the moving machinery of the harvester," having been witnesses to that patent; so that they knew it was already a practice of the art to make the machine in separate frames, which any mechanic would know how to

adjust with reference to each other, *the moment the plan and purpose of such an adjustment was stated.*

If defendants had built their machines while this Watson, Renwick & Watson patent was in force, there is no question but what they would have infringed that patent. If sued for that infringement, could they have justified it, or defeated the patent, on the ground that the specific mechanical means of adjusting the binder relative to the cutting apparatus (when this was employed as an alternative for adjusting the cutting apparatus relative to the binder) was not shown in the patent? Certainly such a defense would not be entertained for a moment. The presumption would be that the patent, which had passed the Patent Office, showed the invention sufficiently to enable a skilled mechanic to apply it. It could not be impeached for insufficiency, unless it were made to appear affirmatively that it did not disclose the invention sufficiently to enable a skilled mechanic to construct it. It is not required of a patent that it do more than indicate the invention to the public, so that, with the aid of mechanical skill in carrying out the plan of the patent, that invention can be made available to the public. If this has been done, the patent is sufficient, not only to protect the patentee in the invention, but to prevent its being thereafter appropriated by others.

See *Mowry* v. *Whitney*, 14 Wall., 620, 644.
Ives v. *Hamilton*, 92 U. S., 426, 432.
Seymour v. *Osborne*, 11 Wall., 516, 540.
Loom Co. v. *Higgins*, 105 U. S., 580–586.

This is not a case where defendants are undertaking to incorporate into an old patent some function which is foreign to the purpose of that patent, or to show how simple would be the mechanical problem of endowing an old machine with a capacity differing from that which it was in-

tended to have. It is not to be confounded with such a case. If the Watson, Renwick & Watson patent had been silent as to any adjustment for the purpose of centralizing the band, there would then be much force in saying that defendants could not anticipate a subsequent patent by showing how easily the mechanical adaptation of the Watson, Renwick & Watson machine to such an adjustment could be made after the plan was suggested. It would be said that it was in conceiving the plan and recognizing the utility of such an adjustment that the invention consisted, and the question was not how much mechanical skill it required to introduce the adjustment after it was conceived of, but how much originality was involved in the conception.

Watson, Renwick & Watson not only conceived of, described, and patented such an adjustment; they showed distinctly the alternative means to carry it out. In doing this they had performed the whole work of the patentee, and had exhausted any invention that might be involved in such an adjustment, when made by moving the binding machine bodily. If there were any room for patentable invention in carrying out this adjustment (as there certainly was not under the modern decisions of the Supreme Court touching the question of patentable invention as distinguished from mere mechanical skill), it was confined to the precise mechanical means of providing for the adjustment, and could afford no foundation for a patent that would cover broadly just what was claimed in the Watson, Renwick & Watson patent.

Watson & Renwick were patent solicitors and mechanical experts, particularly familiar with the mechanical arts, and with the requirements of a patent. (See dep. Renwick, Hoover & Gamble Rec., p. 68, A. 25, 26.) The fact that in taking out a patent in their own behalf (one dis-

playing great ingenuity, and remarkably anticipating the demands of the art) where they were claiming such an adjustment, they confined themselves to showing the alternative adjustment, while stating that the adjustment of the binder might be made for the same purpose, indicates their unhesitating judgment that the carrying out of this plan was merely a mechanical task and did not involve invention. The fact that the Patent Office granted the patent with this description and claim, without exacting more specific exhibition of the means for adjustment, indicates that in its opinion the means for carrying out this adjustment would be obvious to mechanics.

No person has ventured to express an opinion that any skilled mechanic would not have been capable of applying this adjustment; while defendants' witnesses, Steward, Quimby, and Staley (in the testimony already cited), have stated, what seems obvious without statement, that such an adjustment, after the plan was once described, required no more than ordinary mechanical skill for its application.

Complainants' expert, Renwick, carefully avoids expressing an opinion on this question. The questions put to him in examination by complainants' counsel indicate that they were studiously framed to relieve him from any expression of opinion upon it. He is asked, not whether, in his opinion, any skilled mechanic would be capable of applying the invention claimed in the Watson, Renwick & Watson patent, by the use of mechanical skill and intelligence, but whether (p. 699, Vol. 1, Warder Rec., Q. 14):

"A competent mechanic would be likely to make a machine like defendants' exhibit model of Watson, Renwick & Watson patent of 1851, with binder adjustable?"

This is the question which he answers, and which (as he knew as well as anybody) was quite irrelevant to the question of the sufficiency of that patent.

Again he is asked (p. 700, Q. 16):

"Could a machine like the model named in the last two questions be made from the descriptions and drawings in the Watson, Renwick & Watson patent, without the exercise of independent invention?"

This again is quite immaterial as touching the sufficiency of the patent, though the fact that a variety of models of this kind had been provided would seem to be stronger evidence than any mere expression of opinion to the effect that it only required mechanical skill to make them, after the plan was suggested. He answers this in the negative, and gives as his reason that he once tried to plan the Watson, Renwick & Watson machine, with the binding apparatus adjustable,

"And had to contrive, study, and invent before I devised a plan that seemed to have a probability of success, and I remember enough of that plan to say that it was entirely different from the model in question."

It is evident, from this answer, that the idea of invention upon which he was proceeding (and which was a common one prior to the decisions of the Supreme Court within the last ten years) was that whatever called for the exercise of intelligence or mechanical skill—*any thing, except making a Chinese copy*—constituted invention. His answers shows that, when set to the work, he made the adjustment successfully, and the fact that it was accomplished in a different way from that adopted by either of the model-makers who represented such adjustments introduced into the Watson, Renwick & Watson machine, shows how numerous are the methods of such adjustment available to skilled mechanics, when once instructed that it is to be made. It illustrates, too, the inconsistency of the assumption that a mechanic who had *furnished one method* of making this adjustment would

be entitled to a patent that would cover *all methods* of making it.

In *Peters* v. *Hanson* (129 U. S., 541), this court held that the application of ordinary means for lateral adjustment of one device with reference to another did not constitute patentable invention.

See, also, *Morris* v. *McMillon*, 112 U. S., 245.
Penn. R. R. Co. v. *Locomotive Truck Co.*, 110 U. S., 490.
Stephenson v. *Brooklyn Ry. Co.*, 114 U. S., 149.
Collins Co. v. *Coes*, 130 U. S., 56.
Orth v. *Manhattan Ry. Co.*, 132 U. S., 84.
Consolidated Roller Mill Co. v. *Walker*, 138 U. S., 124.
Union Edge Settee Co. v. *Keith*, 139 U. S., 530.
American Brass & Copper Co. v. *Electric Supply Co.*, 144 U. S., 11.

Renwick objects to the model of the Watson, Renwick & Watson patent having the binding machine movable relative to the cutting apparatus, instead of the cutting apparatus movable relative to the binding machine, because it exhibits the binding apparatus sliding in grooves (the alternative arrangement mentioned in that patent, which he says is not shown in the patent. The patent does show the cutting apparatus sliding in grooves longitudinally of the binding machine, and states that these conditions may be reversed.

He objects to it because it shows the connections between the parts are such as to permit the binding machine sliding relative to the harvester, which he does not find in the drawing of the patent, the drawing not undertaking to illustrate more than one of the methods of adjustment referred to in the specification. He assumes that the binding frame and harvester frame are mortised

into each other in the patent, though the patent does not so state or indicate, but does state that they are made in separate sections, and by its reference to this adjustment emphasizes the fact that they are capable of movement relative to each other.

He objects to the model because it shows the main wheel on the harvester frame instead of on the binder frame, but the fact that the main wheel would be on the stationary frame, from which power would be communicated to the movable frame, is so obvious that it is difficult to conceive of a mechanic, or even a person of ordinary intelligence, having to be told this; the patent illustrating the form of machine in which the binder frame is stationary, and the cutting apparatus moved relatively to it, shows the stationary frame mounted on the main wheel, from which power is derived. The very suggestion that the other may be made the stationary frame carries with it the implication that the main wheel is to be mounted on it. But beyond this is the express statement in the patent, following the reference to making the binding machine adjustable, that the

"motion of the binding apparatus may also be derived from that of the rake, instead of the latter being derived from the former,"

carrying with it the necessary implication that the main wheel (which is in all this class of machinery the source of power) is, in that case, mounted on the harvester frame, which is traversed by the rake.

In his answer relative to the Watson, Renwick & Watson patent, Renwick carefully avoids stating that the patent does not describe the adjustment of the binding machine relative to the cutting apparatus with sufficient clearness to enable a skilled mechanic to make it. His language is ingeniously framed to avoid an expression of

opinion on the subject. He is asked in direct examination (Vol. 1, Warder Rec., p. 694, Q. 11):

"Whether or not the original patent shows or describes a separate or detachable binding frame."

His answer to this part of the question is:

"The patent *does not use the words separate or detachable binder frame*, nor *describe any construction which would make* the frame, which carries the binder, alone either *separate* or *detachable*."

This is not a carelessness of expression on his part, but a skillful evasion of any expression of opinion on the material question.

Renwick's criticism of defendants' models is sufficiently answered in Quimby's deposition (Vol. 1, Warder Rec., p. 769, A. 17):

"Mr. Renwick refers to certain defects in Defendants' Exhibit Model Gordon Patent of 1868, which he thinks might have been avoided if the builder of the model had observed 'the evident blunder in Figure 6,' and that 'Figures 5 and 6 are six times the scale of Figure 4.'

"In this connection Mr. Renwick says, in substance, that the proper height for the platform above the bottom of the twister carriage could have been ascertained by measuring the distance as represented in Figure 4, and multiplying that distance by six, for introduction into Figure 6.

"He also says, in substance, referring to Figure 6, that if the platform had been represented at the proper height, according to the scale upon which Figure 6 is drawn, it would not interfere 'with any mechanism beneath it, and the machine would be an operative one and constructed fairly in accordance with the drawings of the patent and like complainants' model of the same machine.'

"And in answer to Q. 20, referring to the complainant's Exhibit Model of Gordon's Harvester and Binder of 1868, Mr. Renwick says: 'I said in my direct examination, in substance, that it was a correct model of the devices referred to in the first claim of the 1868 patent. I now say that it is a fair model of the whole machine,

although it has an addition to it not represented nor described in the patent; this addition is the two brass wings which are attached to the twister carriage and which connect and partially close the long slot in the platform on which the gavel is bound'

"I remark, as to this criticism of Mr. Renwick's, that the drawings of the Gordon patent are defective in many respects, and that Figure 6 is not only wrong as to the height at which it represents the platform, but also wrong as to some of its horizontal dimensions.

"I find in examining complainants' model of the Gordon 1868 machine, that it differs from the drawings of the patent not only in respect of containing the two brass wings attached to the twister carriage, to which Mr. Renwick refers, but also as to the relative thickness of the slide, 14, and the platform immediately over that slide. As represented in Figure 6, the section of the platform immediately over the slide 14 is about three times the thickness of the slide 14, whereas in complainants' model the portion of the platform over the twister is a metallic plate, apparently of the same thickness as the slide, 14. This affords more space underneath to contain the twister gear. In defendants' model, there being an insufficient space beneath the platform to contain the twister gear, the sliding plate 14 is provided with what Mr. Renwick calls a 'horse shoe bend,' so that it may be permitted to slide horizontally and be operative for the purpose for which it designed.

"I find that the drawings of the Gordon patent are so defective, and disagree with each other so much as to dimensions, that it would be impossible to construct an operative model from them without departing from the dimensions indicated in some one or more of the figures.

"Mr. Renwick's criticism of the frame W, which extends across from the shifter, and is fastened to the twister box or frame—that is too light—seems to me to be sufficiently answered by the fact that in the model it successfully performs its function of connecting the shifter with the twister box, so that when the shifter is moved to move the binding arm, the twister box is correspondingly moved.

"As to Mr. Renwick's criticism that this arm is further back from the front than is represented in the drawings,

I remark that the similar arm in complainants' model is further forward than it is represented in the drawings; but I do not think that such departures from drawings which are manifestly defective and irreconcilable with each other are of any serious importance. Both of the models show the frame W, the devices for reciprocating it, and the arm connecting it with the twister box, so that, when it is reciprocated, both the binding-arm and the twister box will move simultaneously. They both show the devices for operating the rake and transmitting the motion from the rake-operating lever to the twister, and the devices for rocking the rock-shaft upon which the binder-arm is mounted.

"Further, as to the arm connecting the twister with the twister box, whether it be in the position in which it is represented in the drawings, or in either of the two positions in which it is placed, respectively, in the two models, it is manifestly the fact that the butt end of the bundle of bound grain will be lodged upon it when the bundle is discharged; and it seems to be very plain that, in whichever position the arm be placed, it is objectionable in so far as it diminishes the available length, fore and aft, of the gap between the platform and the drive-wheel frame, through which it is intended that the bound bundle shall be discharged to the ground.

"Referring to 'Defendants' Exhibit Watson, Renwick & Watson, Harvester and Binder of 1851, with adjustable cutting apparatus,' Mr. Renwick says: 'The model is not correct; in my opinion it is a false one.' In discussing this model, Mr Renwick compares it with a full-sized copy of the drawings of the Watson, Renwick & Watson patent of 1851. I have not had these drawings before me, the original exhibit having been lost, and my efforts and the efforts of counsel for defendants to obtain a copy in time for my use at this examination having failed of success.

"Mr. Renwick finds fault with the substitution of angle plates as a means for securing the upright members of the binder frame to the horizontal sills of the machine, in place of what he thinks must be mortises and tenons, not because mortises and tenons are represented in the drawings, but because mortises and tenons are ordinary means for fastening the bottom of a perpendicular member of a

frame to the sill upon which it rests. I do not think that the employment of the angle plates as the means of fastening the lower ends of the uprights to the sills, in defendants' model, involved the exercise of any thing more than ordinary mechanical knowledge. Mr. Renwick says, however, that a horizontal sill which is parallel with and near to the stubble side of the platform, and which he has marked 'X' in the drawing which he used, is omitted from defendants' model, the statement in regard to this being as follows:

" 'Now the constructor of this model has seen fit, for some reason or other, to leave this longitudinal sill, X, entirely out of the model. When he left it out he found the vertical pieces, with curved feet at their end, would not be held in place, so he screwed to the bottom of these feet a plate of brass, *not shown in the drawings or described in the patent*, which extends under the raking platform, and can be screwed fast to it so as to hold these curved feet in place.'

"It seems to me that Mr. Renwick's criticism is sufficiently answered by calling attention to the fact that the plate of brass to which he refers, and which he says is not shown in the drawings, or described in the patent, is illustrated in figures 11 and 12 of the drawings, and is described in the first column of the sixth page of the printed specification as a knotting device to be used as an alternative for the eyeletting device previously described. The language of the specification to which I refer is as follows:

" 'In the above description, we have described a device for uniting the extremities of the cord which encircles the sheaf, by compressing them in an eyelet. This method possesses many advantages, but as it is difficult in some districts to obtain machine-made eyelets, we have invented a device by means of which the ends of that portion of the cord which surrounds the sheaf are united by tying them into a knot. This device is represented at Figs. 11 and 12, the former being an elevation, and the latter a plan of the same.'

"Now, as I understand, figures 1 and 3 of the drawings represent the machine as provided with the eyeletting mechanism; and what the constructor of defendants' model has done, has been to substitute for the eyeletting

mechanism represented as employed in figures 1 and 3 the knotting mechanism shown in detail in figures 11 and 12; and in embodying the knotting mechanism of figures 11 and 12 in the model, he was obliged, as I understand it, to remove the sill which Mr. Renwick has marked X, in order to make room for the brass plate upon which the knotting mechanism is erected, and to hold the brass plate in place by fastening it to the lower ends of the uprights marked T T in figures 1 and 3.

"In view of these considerations, I think the term 'false,' applied by Mr. Renwick to defendants' model of Watson, Renwick & Watson's machine of 1851, is undeserved.

"Mr. Renwick, in referring to 'Defendants' Exhibit Model of Watson, Renwick & Watson Harvesting and Binding Machine of 1851,' with binding machine adjustable, describes with great detail the formal departures from the patent which he finds in that model, and which, as it seems to me, were obviously required to be made in order to carry into effect the plain language of the Watson, Renwick & Watson patent, and make the binder adjustable with respect to the cutting apparatus, and to thereby embody in the model the invention especially referred to in the third claim in the words following the asterisks in the subjoined quotation:

"'The method of adjusting the binding apparatus to the length of the cut grain . . . by moving the binding apparatus nearer to or farther from the front of the platform in such a manner that the sheaf may be bound near the middle of its length, whether it be long or short.'

"This claim plainly refers to the expedient mentioned in the specification of making the binding apparatus adjustable with respect to the cutting apparatus.

"Now it is true, as Mr. Renwick says, that the alterations necessary to make the binder adjustable are not described in the specification, and I infer that the inventors, and possibly the Patent Office, in granting the third claim, assumed that it required merely the exercise of mechanical skill to carry out the suggestion of the patent, and make the binder adjustable with respect to the cutting apparatus. In my opinion, nothing but the exercise of mechanical skill and judgment was required to make the binding machine adjustable in the manner in

which it is made adjustable in defendants' model. I am unable to see how a valid claim to an adjustable binding apparatus could have been founded upon the adjustable binding apparatus embodied in defendants' model after the issue of Watson, Renwick & Watson patent of 1851, in which this method of adapting the binding apparatus to bind centrally sheaves of grain differing in length was referred to in the specification, and made an especial subject of claim.

"In answer to Q. 27, referring to defendants' model of the Gooday Thatching Machine, described in British patent No. 2,419, of the year 1866, Mr. Renwick says:

"'The model is a false one. It shows only a reciprocating needle entering the straw from the upper side, with the usual set of accessories below the straw.

"'Reference to figures 3 and 4 of the patent, from which this model apparently has been made, clearly shows two reciprocating needles above the straw, only one of which is shown in the model.'

"I do not think that any thing more is needed to show the unwarrantable harshness of the term 'false,' which Mr. Renwick applies to this model than to call attention to the subjoined citation from the third page of the specification, and to the third claim. The citation to which I refer commences on line 26, on page 3, and is as follows:

"'The stitching may be done by needles or hooks or by sewing machines of the ordinary construction, but in order to obviate the necessity for passing the thatch or matting or other material over the table more than once, I propose to employ a sewing machine, constructed as follows.'

"The language of the third claim is:

"'*Thirdly.* The adjusting needle machines, with one or more needles, as herein described, or similar thereto.'"

After this deposition of Quimby was taken, complainant applied for and obtained, by order of court, three months in which to rebut it. This length of time was granted on the representation that it was desired to take Renwick's deposition in reply. Renwick's deposition was not taken in reply, and it would appear that he found it

impossible to make any reply. (See order of court made January 6, 1888, Vol. 1, Warder Rec., p. 77.)

The adjustment of the delivery-apron relative to the binding-platform, described in the Watson & Renwick patent of 1853, is the converse of defendants' adjustment, which moves the binding platform relative to the delivery apron.

The language of the Sherwood patent of 1858, describing this adjustment, has already been quoted. It left nothing for Gordon except the connecting link or shifter, by which uniformity of movement between the binder and twister were preserved while travelling on their otherwise independent ways. If this was invention (and it seems hardly consistent with the later decisions on this subject to hold that it was), it was an invention confined within very narrow limits, and only called for by the facts that the binder and shifter were severally adjustable in lieu of the movement of the binding machine bodily. Such a connecting link could not be inserted in a machine constructed on the plan of defendants', and if it were inserted, it could not operate, since both these elements are so mounted that they could not be pushed backward or forward by it.

Complainants called McPherson as a witness in their behalf to testify that Gordon had mentioned his adjustment to him before applying for his patent. His testimony is very significant as showing, first, that he, McPherson, at that time understood the adjustment of the machine bodily as a means of effecting this adjustment to be already an obvious expedient, and second, that he understood from Gordon's conversation that it was an adjustability that dispensed with this movement bodily of the machine to which Gordon laid claim.

He says, in direct examination (Rec., Hoover & Gam-

ble case, p. 75, A. 16), that Gordon told him he was working on a grain-binder; and that he, McPherson, asked:

"'Have you got any thing new in particular?' 'Yes,' he said, 'I have got one nice new feature, so as to slide the binder backward and forward, so as to adjust the binder to any length of grain, long or short.' I told him it was nonsense, he could just as well bolt the binder on for different lengths of grain as to shift it."

The history of the Carpenter machine is significant as showing that the Watson, Renwick & Watson plan of adjusting the binder was practically applied years before Gordon began the first machine which ever reached the stage of being even tested in the field.

Carpenter's grain-binder was mounted on a harvester in slots, to enable it to be adjusted forward and backward on the harvester, to adapt it to binding centrally grain of different lengths.

Complainants' witnesses admit its use in the field several years before Gordon made his first field test. The machine corresponded with defendants' in its mode of mounting the binder, and of adjusting it, and followed the Watson, Renwick & Watson plan of relative movement.

There is a large amount of evidence in behalf of defendants coming from disinterested witnesses of high standing, who fix their dates by events in their lives about which there would seem to be no room for mistake, and who claim to have seen this machine, thus constructed and mounted, operated in the field as early as the autumn of 1863, or the harvest of 1864, while the evidence shows clearly, and without contradiction, that Carpenter was making models and drawings for at least one or two years prior to the time he had this machine in the field.

Complainants have called witnesses who testify to having seen the machine used the same place where defendants' witnesses saw it, one or more years later than the dates named by defendants' witnesses. Much of this evidence is not inconsistent with defendants' evidence, since Carpenter is shown to have used his machine successive seasons on the same farm.

So, too, there is evidence in behalf of complainant tending to show that a photograph of one of the machines offered in evidence was taken a year or two later than the earliest date when defendants' witnesses state that machine to have been used. This is not necessarily inconsistent with the machine having been used at the date named, since the date of using the machine, rather than of taking the photograph, is what defendants' witnesses have referred to. There is evidence taken by complainant tending to show that a machine which Carpenter thinks was made in 1863 was not completed until 1865.

It is not necessary to inquire whether defendants' witnesses as to the earlier uses are or are not correct as to the year in which the uses took place, and I shall not contend that any pretended use of an adjustable binder prior to the harvest of 1865 is sufficeintly established to be considered.

Assuming, for the purpose of this case, that the dates of the several Carpenter machines (for the evidence shows him to have constructed in successive seasons prior to 1868 several different styles of harvesters and binders, each built as separate machines and adjustably attached to each other) are not earlier than complainants' witnesses place them, it still appears that these machines, with the method of attachment and adjustment which has been adhered to from that time to this, had been publicly used in the field for three successive seasons (1865, 1866 and

1867) before Gordon made his application for a patent or made his first practical test, and before he began to build the first machine which he ever tested in field or put to any use. Complainant has introduced publications as early as January 15, 1866, eulogizing the Carpenter harvester and binder, referring to them as having received a diploma and flattering endorsement at the State Fair of 1865, saying that Carpenter had already built two full-sized machines and three models, and that "we examined the new working model of the rake and binder, and it struck us as not only very simple, but complete and certain in its action;" and they have introduced other publications scattered through 1866 and 1867 referring to various uses of successive Carpenter binders in the field and upon public exhibitions, all of them speaking in high terms of them. One of them, a publication in the Wisconsin State Journal of August 26, 1867, entitled "A NEW LABOR SAVING MACHINE—AUTOMATIC BINDER," speaks of it as a machine upon which Carpenter has been at work for nearly five years. Carpenter testifies that the reaper on which his first binder was used was made at Racine in 1863, and that the binder was made sometime prior to that reaper. (Vol. 1, Warder Rec., p. 370, A. 107, 108.) He says they were used on the Young farm near Madison in the late harvest of the same year; that he had prior to building these machines made models and drawings; that they all proceeded, as did all his subsequent machines, on the plan of building the harvester and binder separately and hanging the binder on the harvester by slots and bolts so that it could be adjusted backward and forward for different lengths of grain; that the first models and first machine were provided with a lever for effecting this adjustment; that while all the subsequent machines had the same provision

for adjustment, so far as the slots and bolts were concerned, they were not all provided with levers, but some of them depended upon pushing the machine backward and forward by hand, mentioning one instance where the irregularity of the grain required such frequent adjustment that one of the men working with him (Baker) attached a temporary lever for the purpose of sliding the machine backward and forward. Baker describes the same incident. The testimony of complainant and defendant concurs in showing that one or two seasons subsequent to the use of his first machine Carpenter built a second, in which the reaper, unlike the first (which was a low-down reaper), had an elevator resembling in some respects the machine which subsequently became generally known as the Marsh harvester, on which the binder was next used, and that after it had been used on this at least one season, and had been exhibited to two bankers by the names of Hill and Mills on this elevator reaper, these bankers arranged for an interest in the Carpenter invention, subsequently buying a regular Marsh harvester upon which the Carpenter binder was used during the succeeding season, and that, with some modifications, it was used for several seasons thereafter. Evidence taken in behalf of complainant shows by book entries that a Carpenter low-down harvester was completed in the summer of 1865; that some modifications were made in the binder in May, 1865; that the Hill and Mills purchase (which complainants' witnesses admit to have been after either the second or third machine had been used in the harvest field) took place in May, 1867; that their purchase of the Marsh harvester (which succeeded the elevator harvester on which Carpenter used his binder after his machine of 1865 was laid aside) was in July, 1867; and that the Carpenter binder was used in the harvest field, on different styles of

harvesters, in 1865 and every season thereafter down to some time in the '70's, when the Locke binder, and soon after the Gorham and Appleby, each with the same style of adjustment, came into the field.

If it be conceded that the several Carpenter harvesters and binders were each imperfect in comparison with the modern machines, or deficient in elements which have since become recognized as necessary constituents of the automatic twine-binder, this was still more emphatically true of the Gordon machine of 1868 and 1869, which were the only machines ever built upon the Gordon plan. So far as the adjustment for central binding was concerned, the Carpenter machine was, from the beginning, a complete and perfect embodiment of the plan which has prevailed to this day. Carpenter was, during the years including and following 1865, undertaking to improve his method of forming the gavel, of separating the grain, of compacting it, of uniting the bands, and of regulating the intervals at which the binding should take place; but the individual construction of the binder and harvester, which was employed in all his machines, excluded any difficulty about their relative adjustment, and the bolts and elongated slots were at once a simple and a complete means for making the adjustment.

Carpenter does not claim to be positive about the earlier dates given by him. Complainants' evidence tends to show that some of these dates are placed about two years earlier than they should be; but they have to concede the use of the first full-size machine, including binder and harvester, not later than the harvest of 1865.

Carpenter, after stating that he completed his first binder in the fall of 1861 (Vol. 1, Warder Rec., p. 356 A. 8–12), testifies, p. 357:

"13. When, if at all, did you first apply your grain-binder to a machine for cutting grain?

"A. It is quite difficult just at that time to locate dates. I had a farm and office which I was desirous of disposing of to enable me to go on with this work. It took up so much of my time that I did not get a machine into the field with this binder attachment until late in the year 1863, though I was in the meantime at odd spells at work in perfecting a machine for that purpose."

Then, after describing the construction of the lever (which was a low-down lever, as distinguished from an elevator harvester), he says, p. 358:

"The frame of the machine was so contrived that a pole might be attached at the front for pulling or drawing the machine in the usual way, or attached to the rear for pushing the machine similar to headers. I used the latter. I attached the binder, already described, between the platform and the master wheel. To make the binder adjustable and yet sufficiently rigid to hold its place, I cut four slots, two near each end of the plank to which it was originally attached. These slots being some eight or ten inches in length, were intended to enable me to move the binder forward or back, to bring the wire as near as may be to the center of the bundles in long or short grain. To hold it practically rigid I inserted bolts through the upper section of the cutter-bar, in front, and through the frame in the rear, having washers between the heads of the bolts and the plank.

"In addition to a semi-circular steering-gear for the driver I placed a lever just in front of his seat, arranged in the ordinary way of a wagon-brake lever and catch. To this lever I attached a rod, running along the pole, and also a jointed rod connecting with an angle iron at the rear of the machine, and also a jointed rod connecting the binder with the opposite end of said angle-iron. Thus the driver was enabled to move the binder backwards or forward by means of said lever. To enable this to be practically done I had planed a groove in the aforesaid driving-rod, inside of the master wheel, on which I placed a hub with a spline, enabling this hub to revolve

and carry force to the binder, while it might be moved forward or back on the side rod a distance equal to the said slots in the binder frame."

Then, after stating that "Defendants' Exhibit Model of Carpenter's Combined Reaping and Grain-Binding Machine of 1863" practically represents this machine, he says (p. 360, A. 17:)

"It was very late for harvest in 1863 when I got the machine so completed that I thought I could use it. In fact, the whole harvest had been completed, as I found by sending out some friends to see whether we could find anything to cut. We found by some means—I cannot tell how at this time—that just east of the city of Madison, on what was called the Phi. Young farm, a small piece of oats the owner did not intend to cut. They were badly weather-beaten and much crinkled. We drove into the field and, putting the reel down very low, managed to get some brushy straw on the platform, which was bound very well, considering the circumstances. We did not remain long, however, under such unpropitious circumstances and left the field joyous in the belief that we had cut and bound automatically the first grain that had ever thus been cut and bound. It is my impression, though I will not be positive, that this was some time in October. I know it was very late in the season.

"18. With what material did you bind the grain, and how did the binding machine do its part of the work on this occasion?

"A. I bound with wire. It bound all we could get into the binder."

As there is evidence in behalf of complainants showing such a machine to have been used by Carpenter on the same farm in the harvest of 1865, I shall give the complainants the benefit of this later date and assume that it was in 1865 instead of 1863 that this machine was used. Carpenter then describes building an elevator harvester having some of the characteristics of the Marsh harvester the next year and using the binder on that in the harvest

of the next year. Of the second machine he says (p. 361, A. 22):

"Believing I was making a machine for experimental test only, I omitted on that machine the lever to move the binder, having arranged for the slots and bolts the same as in the machine heretofore described. It was one of my first discoveries that the binder machine or some equivalent action must be so constructed as to move fore or aft to secure the band around the center of the bundle as nearly as may be."

These slots and bolts are substantially the means for adjustment used in defendants' machines. Complainants' expert, Renwick, treats them as corresponding to the claim in controversy, in the absence of any lever—there being no lever used on some of defendants' machines, and none mentioned in the Gordon claim or shown in the Gordon caveat. (Dep. Renwick, Hoover & Gamble Rec., p. 67, X Q. 17–22.)

Carpenter states that this second machine was operated in the harvest of 1864. The latest date assigned this elevator machine by complainants' witnesses is the harvest of 1866. Record entries, as well as the publications before referred to, show that it could not be later than that date. When Carpenter is asked how this second machine was adjusted for long and short grain, he answers (p. 363, A. 28):

"I have an impression that I answered that point yesterday, but I will state, however, that on every machine I made from first to last, I had provided means by which the binder mechanism could be moved forward or backward. Such means have already been described by me, with the exception that for mere test in the field I did not consider it important to construct the various devices to move by lever, when I could in a moment move the binder either forward or back by means of slots and bolts, as already described.

"29. Do you remember any occasion when the lever

was put on one of your machines after you went to the field? And, if so, please state it.

"A. Yes. I think it was in the harvest of 1865. We had been promised a chance to operate the machine at the farm of Dexter Curtis, I believe, and it was said the grain was standing well. Previous to going to the farm, which was shortly after we heard of the condition of the grain, a severe rain and wind storm had occurred. When we got to the field the grain, which was very heavy, was found in spots to have been twisted (by cyclonic currents, I suppose), twisted or twirled and badly crinkled; other portions seemed to stand very well.

"I think we entered the field and commenced cutting. The machine cut and bound very well, and the band was placed properly in the standing grain; but when we came to the spots of twirled grain the bands seemed to be too near one end of the bundle. Mr. James E. Baker, who went out with me, a master mechanic, said he could fix it in a short time. He started for the shop, and in, I should think, some two hours, came back with some tools, bolts and pieces of wood, by which he improvised a shipper that he could move from him by his foot while driving, and to reverse the motion he either fastened the lines or a rope, I forget which, to the outer end of the temporary lever, by which he could pull the same towards him. I am not able to describe how that was connected, only I know that he accomplished the object very well, after which we had little difficulty on that score. I would state here that usually, so far as my experience goes, we could go into a field with varying lengths of grain and select a piece suited to one setting of the binder, cut that, and reset for another piece of different length without much trouble in setting the binder forward or back in the manner described for hand mode; but the field here spoken of was so situated by these intermittent patches of twirled grain that we could not well select a piece in which we could cut more than three or four bundles without some change; something like that, as near as I remember it."

He is asked in cross-examination (p. 374:)

"134. Who made the device for changing the ad-

justment of the binder upon the frame of the machine for you?

"A. My impression is that as the work was light and required no active machinery except drilling that, I put that on myself at my residence. I had a foot lathe for drilling and turning, a portable forge, anvil, vise, and a large number of small tools."

He says (p. 374, A. 135:)

"One of my first impressions of the nature of an automatic grain-binder, and which I studiously observed in my every effort to perfect one, was the necessity of having some convenient arrangement as a means to secure the band near the center of the bundle."

Also (p. 390):

"281. Were any of your binders ever put into practical use?

"A. Yes, sir; I think every year from 1863 to 1874.

"282. Do you not refer to the experiments which you have detailed in your previous testimony in your answer to the last question?

"A. Yes, sir; I do.

"283. I referred to practical in distinction from experimental use in my question. Will you answer it with that understanding?

"A. If I understand what you mean by the word 'practical' to be suited to the purposes intended, I answer that my binder from the first was a practical machice."

Baker, an engine builder, testifies to having seen the Carpenter binder and harvester, corresponding to the model in evidence as the 1863 machine, at the Janesville Fair in 1864. (Vol. 1, Warder Rec,. p. 312 A. 1–12.) Complainants' witness Jaquish says that he saw the machine there in the fall of 1865 and the publication from the Wisconsin State Journal January 15, 1866, before referred to, mentions the exhibition of the Carpenter binder and reaper at the fair of the preceding fall (1865), and I shall assume that the latter date is correct. Baker testifies to seeing

the second Carpenter machine having an elevator something like the Marsh harvester, with the binder mounted on it, operate in the harvest field in the next year. He is asked (p. 314):

"17. How was the binder connected to the harvester as respects being movable or immovable?

"A. It was connected movable.

"18. In what direction was it made movable, and for what purpose?

"A. It was made to move either forward or back, to bring it into position so the bundle would come into proper position for binding.

"19. What was done with this machine on Beverly Jefferson's farm in 1865 while you was there?

"A. Mr. Carpenter had it there for the purpose of testing it. He had it there in a piece of grain. He was running it; cutting and binding grain and operating it the best he could.

"20. How long was you present on this occasion?

"A. Oh, I might have been there an hour or an hour and a half; a short time. I was driving by, and just stopped to see the operation.

"21. What kind and condition of grain was it operated in while you were there?

"A. I think it was in a piece of oats that it was in, and in quite bad condition; tangled up somewhat.

"22. How did this machine operate in cutting and binding the grain while you were there?

"A. It seemed to cut all right and bind it all right when the cut grain reached the binder. The only serious difficulty I noticed was in getting the grain to the binder in proper shape for binding."

Also (p. 315:)

"25. What was the difficulty in getting the grain to the binder in proper shape for binding?

"A. It seemed to pass up the elevator heads first, as a rule, and enter the binder in like condition, so that in the act of binding the head or binding-arm would pass through and merely divide the quantity that fell into it instead of picking up a bundle.

"26. Was there anything in the condition of the

grain that led to this mode of passage up the elevator; and, if so, what was it?

"A. A portion of the grain was lodged, and on the side of the field that I saw the machine operate the grain inclined rather toward the elevator side of the machine than from it. As a result it would enter the elevator on an inclined position and proceed upward in the same position.

"27. What proportion of the grain cut by the machine did it bind into bundles while you were there?

"A. With few exceptions I think it bound all the grain that was cut; just how much I could not say; I only followed it on the one side.

"28. What kind of binding material was used on the machine?

"A. Wire."

He says that during the fall of the year in which he saw the second machine operate Carpenter brought the reaper and binder to his shop and made some change in the reaper, and he saw the changed machine operate in the harvest field the succeeding season (p. 316, A. 33–62). He is asked (p. 318):

"49. Please explain how the binding machine was connected to the harvester in the machine of 1866.

"A. The base of the frame of the binder rested upon the extending pieces of the main frame of the harvester, and was held to these pieces by bolts passing through slotted holes in the base of the binder and through holes in the pieces of frame. The upper part of the frame of the binder had a piece extending from end to end of the binder, which piece, in fact, was a part of the frame of the binder, and when the binder was in position on the machine the piece last mentioned came alongside and parallel with a similar piece which formed a part of the framework of the harvester, at intervals through which were bolts that passed through slotted holes through the frame piece of the binder, all these bolts being provided with proper nuts and washers.

"50. What was the object of the slotted holes in the binder frame which you have described?

"A. To admit of the binder being moved backward or forward.

. . . . . .

"52. Was a lever at any time put upon this machine, and if so, please state the circumstances under which it was done and for what purpose.

"A. There was a lever put on temporarily after we had entered the field, and went a few rods with the machine by placing a piece in front of the elevator and fastened to the frame of the elevator by means of an angular piece of iron, which was bolted to the frame of the harvester. The lever was secured to this piece of iron, which passed through a hole about in the center of the lever from end to end. The end of the lever next to the binder was attached to the binder frame; the other end of the lever reached over in front of the driver, who could lean forward and take hold and operate (move the binder forward or backward) by changing the position of the lever.

"53. Why was not a lever put on the machine before you went to the field, and how did you come to provide one for it after you got there?

"A. At the time he was getting the machine ready to go out to the field the grain stood very nice, and Carpenter thought he could get along without it. The most he was after then was to test the delivery of the grain with the binder. On the evening before we went out there was a storm that snarled up the grain; hence we found it necessary to have the binder under control in order to do any work at all."

Baker also testifies that he saw full tracings of the Carpenter binder in the fall of 1862, and that Carpenter then made sketches to show how he proposed to make his reaper. He fixes this as in 1862, both by a railroad accident on the 14th of July of that year, in which his foot was crushed, and by the fact that he removed from the place where he was living in December of that year. (P. 331, A. 1–27.)

Complainant's evidence shows that Baker occupied the shop to which he says the Carpenter machine was brought

in the fall of 1865, and in which it was altered before the next season, from the spring of 1865 to the fall of 1866, indicating that this must have occurred at the time he names, and certainly could not have been later than 1866. (See dep. complainants' witness Reuter, p. 401, Vol. 1, Warder Rec., A. 12–29; Goodenow, p. 404, A. 1–14.)

Mills, who was president of the bank at Madison, Wisconsin, in 1860–69, testifies to having seen the Carpenter grain-binder in 1864, and having purchased an interest in it the succeeding year (Vol. 1, Warder Rec., p. 321, A. 1–15.) Complainants' evidence indicates that this purchase was made in the spring of 1867 instead of 1865. He describes the operations of the machine which he witnessed in the field during the two succeeding seasons. Speaking first of the machine as it was used the season he acquired an interest, and then of it as he first saw it, he says (p. 324):

"A. The binder was movable or adjustable.

"23. For what purpose was the binding machine made adjustable along the harvester?

"A. So as to bring the wind band as near the center of the bundle as practicable for the various lengths of long and short grain.

"24. How was the first machine you saw of Mr. Carpenter's as respects the adjustability of the binder?

"A. According to the best of my recollection and so far as I am capable of judging, this model (witness refers to 'Defendants' Exhibit Model of Carpenter's Combined Grain-Binding Machine of 1863') substantially represents the first machine that I saw of Carpenter's."

Tenny, who became a pay-master in the army in the summer of 1862, and had been a partner of Carpenter's in the publishing business before that time, testifies that before he went into the army he saw drawings of the Carpenter binder, and subsequent to seeing such drawings

and prior to entering the army he saw a model of a binder which was not attached to a harvester, but which was explained to him by Carpenter as adapted to be attached to any harvester, and in 1873, while home on a furlough, and again immediately after leaving the army, he saw full-size twine grain-binders operated in the field by Carpenter, the first on the Young farm and the second, a different machine, a year or two later on the Dean farm; that the first which he saw in the field corresponded with "Defendants' Exhibit Model of Carpenter's Combined Reaping and Grain-Binding Machine of 1863," the second being an elevator harvester, and that all that he saw, either models or machines, were adapted to lateral adjustment to bind centrally, and so explained to him at the time. (dep. Tenny, Vol. 1, Warder Rec., p. 336, A. 1–89.) In cross-examination, referring to the time in 1864 when he saw the Carpenter machine in operation in the field, he is asked (p. 344):

"90. Did you have your attention called at that time to any device in that machine for altering the position of the band with respect to the end of the bundle?

"A. I did on both those machines, on the first specially, that of '63.

"91. Who called your attention to that device?

"A. Probably Mr. Carpenter. I saw it, though, the moment I put eyes on the machine. All visitors, among the first questions, asked how the band was to be made near the center of the bundle. By taking hold of a lever the driver could adjust the band, according to his judgment, to the length of the grain to be cut in the field. That was the explanation to that question made a great many times in my presence.

"92. Can you describe the construction of that particular device?

"A. It was a lever, within reach of the driver, attached to the binder so it could be moved back and forth. I may not state that in technical language. The model will show what I mean.

"93. Where were the horses attached to this particular reaper and binder—the one you saw in 1863?

"A. They were attached to the rear of that first machine, but the adjustments were such that you could attach the horses to the other side of the machine and draw it instead of push it."

Having referred to a fair at Madison in 1866, he is asked in cross-examination (p. 350):

"140. Were you present at the fair in 1866 to which you have alluded?

"A. I was.

"141. Did you see Carpenter's machine there?

"A. I did.

"142. Do you remember whether it had the device to enable the driver, without leaving his seat, to alter the position of the binding-arm so as to pass the band about the center of the bundle, whether the grain be long or short?

"A. It had.

"143. The machine shown at the fair in 1867 had the same device?

"A. It had. At noon, or about noon, either in 1866 or 1867 (and my memory makes it in 1866) I visited the Carpenter machine on the ground, and found him engaged in exhibiting its working to a large crowd of spectators, farmers, mainly, most of them. He seemed very much fatigued with the work of putting the straw in the machine and binding it, and wanted I should relieve him till he could get lunch. I did so and kept the binder running (he had a man to turn the crank of it) for about half an hour. During that time I was asked by perhaps twenty persons or more—farmers—how the tie could be made in the center of the bundle in the field by a person driving. I took hold of the lever and exhibited the manner of operation to the various persons who asked that question before Mr. Carpenter returned."

Shipman, an architect residing in Chicago, who knew Carpenter prior to and during the war, testifies that he learned that Carpenter was engaged in producing a grain binder during the presidential campaign of 1860, Car-

penter having previously borrowed instruments of him to make drawings of it; that he saw some sketches and drawings and models of parts of the binder at that time (before he entered the army), and he saw Carpenter in the harvest field with a grain-binder in operation during the harvest of 1864; that he never saw him in the field after that time; that he was wounded in the army in 1863, and on recruiting service at Madison in 1864, being then on crutches, and knows that it was at that time he saw this machine in the field. (Deposition Shipman, Vol. 1, Warder Rec., p. 351, A. 1–18.)

Complainant's witness, Hill, admits that it is his recollection that the first Carpenter binder which he saw—that which he saw in Carpenter's yard sometime prior to the spring of 1867—was adjustable to bind centrally. (Dep. Hill, Warder Rec., p. 444, A. 6; p. 463, A. 165–170; p. 465, A. 181–182.)

Complainant's witness, McDonald, testifies to having made grain-binder patterns for Carpenter in the month of May, 1865, fixing the date by book entries. (Dep. McDonald, p. 513, A. 19–40, Vol. 1, Warder Rec)

Complainants' witness, Skinner, testifies that in the early part of the winter of 1865–'66 he saw a model of a grain-binder and reaper, which he understood to be Carpenter's, in the office of H. W. & D. K. Tenney, and says it had the general appearance of "Defendant's Exhibit Carpenter's Combined Reaping and Grain-Binding Machine of 1863." He saw the Carpenter binder on an elevator harvester in a shed at Carpenter's house in the early fall of 1866 (this being the second or third style of working harvester and binder which Carpenter made) and he saw this binder exhibited at the Madison Fair in 1866. (Dep. Skinner, Vol. 1, Warder Rec., p. 530, A. 39–46.)

Complainants' witness, Sheldon, testifies to having seen an earlier style of Carpenter's binder attached to a harvester two or three years before he sold him the Marsh harvester, this sale taking place July 20, 1867. (Dep. Sheldon, Vol. 1, Warder Rec., p. 413, A. 5-12; p. 414 A. 17-26; p A. 417. 47.)

Complainants' witness, Jaquish, testifies to having seen the Carpenter binder at the Janesville Fair in 1865 and also in the field during the harvest of 1865. (Dep. Jaquish, p. 419, A. 18–41; p. 422 A. 70-80; p. 424 A. 102–103.)

While the machine was undergoing modifications from season to season (in this respect differing from Gordon's, which was abandoned as a type not worth modifying or developing further), the type of adjustment in the successive machines built remained the same, and has been followed by machines built ever since. That Carpenter had reduced this method of adjustment to practice, had put it to work in the field, exhibited it publicly, and adhered to it constantly in the construction of his successive machines, finally exhibiting and describing it in his patent in December, 1868 (though apparently all unconscious that it was a matter of invention, or could be, after the Watson, Renwick & Watson patent, made the subject of a claim), has to be conceded upon the complainants' evidence. Certainly Gordon, who had never reduced the invention to practice prior to the harvest of 1868, could not have a patent that would oust Carpenter, or the public generally, from continuing to use what he (Carpenter) had already introduced to the public. If this method of attachment or adjustment had been the subject of invention at the time Carpenter entered the field (as clearly it was not after the Watson, Renwick & Watson patent), he could not be excluded from the right to use it by any man who

had neither reduced it to practice nor applied for a patent upon it until after he had used it in the field for three successive seasons.

Gordon's caveat was simply a secret document, not open to public inspection, which, under the statute, could have no further effect than to entitle him to notice of an interfering application. It implied that he had not perfected the invention and had, as yet, nothing to disclose to the public. When it expired and was not renewed it ceased to have any force even for the purpose of entitling him to notice, and it is a serious question whether allowing it to expire did not operate as an abandonment of what it contained. It was at least an abandonment of the caveat. After its expiration, it certainly could not prejudice those who were meanwhile developing the art, while he had not reduced to practice. If others reduced to practice meanwhile, they could not be subordinated by him.

See *Odell* v. *Stout*, 22 F. Rep., 159.

This caveat does not contain the adjusting lever which complainants' counsel proposes to read into the claim, and if this is taken as an element of the claim, it shows that Gordon had not devised the combination, even theoretically, until long after the date when complainants' evidence concedes that the Carpenter machine was publicly exhibited in the field and at the fair. Gordon meanwhile neither reduced to practice nor applied for a patent, and while the burden is upon Gordon to affirmatively prove reduction to practice before Carpenter, by as reliable proof as would be required for the purpose of establishing anticipation (*St. Paul Plow Wks.* v. *Starling*, 140 U. S., 184; *Clark Thread Co.* v. *Willimantic Linen Co.*, 140 U. S., 181), the evidence is conclusive to the effect that there was no reduction to prac-

tice by Gordon before 1868. The evidence offered to show that Gordon undertook to build either model or machine prior to 1868, is less substantial and reliable than that placing Carpenter's model, drawings, and preliminary experiments with the adjustable binder in or prior to 1863.

Gordon claims to have made intermediate models and machines, but it is significant that no disinterested witness is called to testify to them. It is hardly conceivable that he should have made any models or machines of a character which it was expedient for him to prove in evidence, without being able to call such witnesses to testify to having seen them. He has to concede on cross-examination that the machines which he claims to have built prior to 1868 were taken to pieces without ever being tested in the field. There could be no stronger evidence that they were completely inoperative machines, not even worth making over or modifying. He can not, as against others who had reduced to practice, assert any equity prior to the time when he built the first machine that was thought worth testing in the field, namely, 1868. That was the fourth season after Carpenter's machines had been in the field, according to complainants' evidence, while defendants' evidence indicates that he was making drawings and models on this plan, still earlier.

(Dep. Carpenter, Vol. 1, Warder Rec., 356, A. 7–37, p. 390, A. 281–284; Baker, p. 312, A. 1–65, p. 331, A. 1–27; Mills, p. 321, A. 1–51; Tenny, p. 326, A. 1–24; p. 350, A. 140–148; Shipman, p. 351, A. 1–31; complainants' witness Jaquish, Vol. 1, Warder Rec., p. 442, A. 17–41; p. 421, X Q. 56–86; p. 424, A. 102–107; Draper, p. , A. 1–21; p. 351, X Q. 37; dep. Whare, p. 442, A. 13–29; dep. Hill, p. 444, A. 6–24; p. 457, A. 115–

117; p. 459, A. 136–152; p. 463, X Q. 165; p. 464, X Q. 171–177; p. 465, A. 181–182; dep. Campbell, p. 506, A. 6–27; dep. McDonald, p. 513, A. 18–25; p. 514, A. 36–39; p. 353, A. 54–55; dep Wilke, p. 518, A. 16–26; dep. Wedge, p. 522, A. 2–8; dep Skinner, p. 528, A. 15–24; p. 530, A. 39–46; dep. St. George, p. 535, A. 7–23; dep. Falvey, p. 541, A. 4–11; Publication Wisconsin State Journal, January 15, 1866, p. 417; Publication December 27, 1866, p. 418; Publication August 20, 1867, p. 402; Publication August 26, 1867, p. 403; Publication September 30, 1867, p. 405; Report of Committee, p. 411; Publication February 1, 1868, p. 412; Publication August 5, 1868, p. 414; Carpenter patent of December, 1868.)

See *Whitely* v. *Swayne*, 7 Wall., 685.

This evidence shows that for several seasons before Gordon first entered the field, Carpenter had adopted and was utilizing, in practical form, the old Watson, Renwick & Watson plan of adjustment. Carpenter's mode of mounting and adjusting the machine has continued in practical use ever since, while Gordon's experiment (none the less an experiment because it was patented) dropped out of sight as soon as it was tested, never to be revived. The successful development of the art of automatic grain binding was not waiting all these years for a genius brilliant enough to devise some mode of following Watson, Renwick & Watson's instructions to adjust the binder forward and backward relative to the cutting apparatus. The real problems, of how to gavel, compress, encircle, tie and eject the grain with sufficient precision and certainty, under the jarring conditions incident to field work, to commend such machines to general use, were being worked out by inventors of a different order. The

method of adjustment proposed by Gordon was inconsistent with the accuracy and delicacy of registration which more intelligent inventors were aiming at, as the condition of practical success. It indicated an entire lack of appreciation of these conditions. It shed no light to guide inventors out of the maze of difficulties which enveloped the grain-binder problem. It was at best a mere fire-fly flash, beguiling away from the course along which the solution of that problem must be reached, and luring into swamps where disaster was inevitable.

The language of the Supreme Court in *Atlantic Works* v. *Brady* (107 U. S., 192) well describes the mischief and injustice which would follow if such a patent were to be sustained with any such construction as would cover defendants' machines (p. 199):

"The process of development in manufactures creates a constant demand for new appliances, which the skill of ordinary head workmen and engineers is generally adequate to devise, and which, indeed, are the natural and proper outgrowth of such development. Each step forward prepares the way for the next, and each is usually taken by spontaneous trials and attempts in a hundred different places. To grant to a single party a monopoly of every slight advance made, except where the exercise of invention somewhat above ordinary mechanical or engineering skill is distinctly shown, is unjust in principle, and injurious in its consequences.

"The design of the patent laws is to reward those who make some substantial discovery or invention which adds to our knowledge, and makes a step in advance in the useful arts. Such inventors are worthy of all favor. It was never the object of those laws to grant a monopoly for every trifling device, every shadow of a shade of an idea, which would naturally and spontaneously occur to any skilled mechanic or operator in the ordinary progress of manufactures. Such an indiscriminate creation of exclusive privileges tends rather to obstruct than stimulate invention. It creates a class of speculative schemers,

who make it their business to watch the advancing wave of improvement and gather its foam in the form of patented monopolies, which enable them to lay a heavy tax upon the industry of the country without contributing anything to the real advancement of the arts. It embarrasses the honest pursuit of business with fears and apprehensions of concealed liens and unknown liabilites to law suits, and vexatious accountings for profits made in good faith."

The most extravagant abuses ever perpetrated under the guise of reissue would be trival compared with the wrong which would be inflicted if this unproductive and impotent patent were, after its expiration, to be metamorphosed by judicial construction to cover an art which has been created by other inventors, through the rejection of all that distinguished this patent from what went before, an art which has for these many years been developed to colossal proportions under the patents in conformity to which all successful machines have been built, the vital organization of which excluded the relative adjustability of the binding-arm. Every objection which can be urged against reissues which embrace by nebulous terms an intervening art whose success is due to its having dispensed with the conditions which the original patent was providing for, apply with superlative emphasis to the retroactive reconstruction of this patent by which it is proposed to amplify it after its expiration.

This Gordon patent represents merely a futile essay at invention, which died of inanition at its birth. It was a speculative departure in a direction which was speedily demonstrated to be impracticable. It cannot now be vitalized to appropriate the fruits of others' invention.

The art continued (as well before as after this was projected into it and disappeared beneath the surface) to flow

on in the course marked out by Watson, Renwick & Watson. Gordon's patent left no ripple on the surface. It cannot now be recalled from oblivion to dominate the art which derived neither guidance, nor stimulus, nor suggestion from it.

Respectfully submitted,

ROBT. H. PARKINSON,
Of Counsel for Appellees.

EDMUND WETMORE,
Of Counsel.

Supreme Court U. S.
FILED.
OCT 12 1893
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OCTOBER TERM, 1892.

JOHN H. GORDON, ET AL., *Appellants*,
vs.
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vs.
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JOHN H. GORDON, ET AL., *Appellants*,
vs.
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JOHN H. GORDON, ET AL., *Appellants*,
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BRIEF FOR COMPLAINANTS UPON THE SO-CALLED CARPENTER DEFENSE.

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BRIEF FOR COMPLAINANTS UPON THE SO-CALLED CARPENTER DEFENSE.

One of the defenses relied upon by the defendants in the foregoing entitled causes, was the manufacture and public use of an alleged self-binder, the product of one Stephen D. Carpenter, then residing at Madison, Wisconsin. It was sought to be proved by the defendants that this machine antedated the complainants', and contained the combinations set forth and claimed in complainants' patent. While the defendants attempted to prove this defense in the taking of testimony by a long array of witnesses and evidence elaborated at great length, it was apparently not relied upon on the final hearing and may not be relied upon on the argument in this Court, but it relied upon by the defendants upon this appeal, this brief is filed in support of the complainants' position upon this point.

The complainants insist, first, that whatever the machine devised and used by Carpenter really was, it was not made or used, or embodied in any practical form, until after the date of the complainants' invention, and, second, that the invention of Carpenter did not embody complainants' invention, as shown by the patent to John H. Gordon in suit, in any wise.

The story of Carpenter's alleged invention is substantially as follows: That in the year 1862 he made a binder which used wire from a spool located above the machine. He states: "I attached the binder, already described, between the platform and the master wheel. To make the binder adjustable and yet sufficiently rigid to hold its place, I cut four slots, two near each end of the plank to which it was originally attached. These slots, being some eight or ten inches in length, were intended to enable me to move the binder forward or back, to bring the wire as near as may be to the center of the bundles in long or short grain. To hold it practically rigid I inserted bolts through the upper section of the cutter bar, in front and through the frame in the rear, having washers between the heads of the bolts and the plank. In addition to a semi-circular steering gear for the driver, I placed a lever just in front of his seat, arranged in the ordinary way of a wagon-brake lever and catch. To this lever I attached a rod, running along the pole, connecting with an angle iron at the rear of the machine and also a jointed rod connecting the binder with the opposite end of said angle iron. Thus the driver was enabled to move the binder backwards or forward by means of said lever. To enable this to be practically done, I had planned a groove in the aforesaid driving rod, inside of the master wheel, on which I placed a hub with a spline, enabling this hub to revolve and carry force to the binder, while it might be moved forward or back on the side rod, a distance equal to the said slots in the binder frame." (Deposition of S. D. Carpenter, Record, page 359.) This construction he testified was shown in "Defendants' Exhibit Model of Carpenter's Reaping and Grain Binding Machine of 1863." (Record, page 359.) He further testified that he used this machine in a small piece of oats, on what was called the Phi. Young farm, near Madison, late in the harvest of 1863, some time in the month of October; that he bound the oats in which the machine was then tried, with wire. He says: "I bound with wire. It bound all we could get into the binder. I never tried this combined machine in the field after that." He further testified that he exhibited this machine at Janesville in 1863 and 1864. "I know it was there in 1864. I did not enter it for competition for the reason that I did not suppose there were any other machines of its nature extant, and for the further reason that I was chairman of the Committee on Machinery, and good propriety as well as the rules of the society forbade a committeeman from being a competitor for anything in his class." (Record, page 360.) In 1864, Mr. Carpenter testified that he made another machine, shown in "Defendants' Exhibit, Model Carpenter Patent, December 22, 1868." (Record, page 360.) He says: "I omitted on that machine the lever to move the binder, having arranged for the slots and bolts the same as in the machine heretofore described. It was one of my first discoveries that the binder machine or some equivalent action must be so constructed as to move fore or aft to secure the band around the center of the bundle as nearly as may be."

(Record, page 361.) In relation to this machine, Mr. Carpenter states: "I operated it in 1864 on the Grover Farm. We drove to, I don't know the distance, but it is not a great ways east of Madison, and I think we operated previous to that, however, on the Frost farm, or N. W. Dean farm." (Record, pages 361 and 362.) In 1865, Mr. Carpenter states (Record, page 363) that he used the machine on a farm near Madison belonging to Dexter Curtis, and that a photograph, produced, offered in evidence and marked "Defendants' Exhibit Photograph of Carpenter Harvester and Binder of 1866" was taken just before or just after he went into the field in 1865. (Record, page 365.) Two of the persons shown in the photograph, he says, were Henry Jaquisch, who kept a hotel some 60 rods distant from the place where the photograph was taken, and himself. The machine, he states, which was made in 1863, and first used in October of that year, was made at Racine (Record, page 370); and he was assisted by workmen who lived at that place. "The work was most of it done at Thomas Falvey's shop. Some of it, as I recollect, was done outside, but what or how much or where, I cannot now state. It almost seems to me that some of the work was done at Mitchell's wagon works. The large screw which moves the rake was made at Falvey's shop, or at least cast there." (Record, page 372.) He further testified that he became associated with one Simeon Mills at Madison, who purchased an interest in his binder in 1865. (Record, page 375.) The reasons upon which the dates given by Mr. Carpenter are based are found in the Record, page 378.

"Q. 164. Your first machine was completed, then, in 1863, and was the only machine which you ever built which caused the rake to traverse the platform by means of a large right and left threaded horizontal screw, as I understand it, according to your best recollection?

A. That is according to my best recollection. The way I arrive at these dates after this long period is this: I had to get a 'key' from which I could get dates either way. Finding the dates of Mr. Mills' connection with it was in '65, I knew the machine made at my house must have been the one of 1864, because it next preceded that built by Mr. Mills, and I knew this low down machine was the first one I did build after completing my binder, in 1861, and that it must have been completed some time in 1862 or 1863; I cannot state positively which; but that I might not overstate it, and that the latter was the probable year, I have designated it my machine of 1863.

165. Have you not already testified that your first machine was not completed in time for a test in the harvest of 1863?

A. I have, and the reason I thus stated may be found in the fact that, while I might have considered it completed months before, I was continually finding some new device I thought would work better. It was generally these improvements that delayed the final trial of the machine after I had supposed it was completed."

It will thus be seen that Mr. Carpenter's testimony as to the dates of his invention is dependent upon the date at which Mr.

Mills entered into the contract with him and commenced furnishing means for the development of Mr. Carpenter's mechanical ideas. It was sought to support Mr. Carpenter's testimony on these points by the testimony of several other witnesses: James E. Baker, whose testimony is found commencing at page 312 of the Record; Simeon Mills, whose testimony commences at page 321; S. V. Shipman, page 321, and Horace A. Tenney, page 366.

James E. Baker testified that he had been engaged in building machinery since the fall of 1863; that he saw Mr. Carpenter's machine first at Janesville, Wisconsin, in September, 1864, at the exhibit at the fair of the State Agricultural Society's state exhibition. It was a full sized machine and like the model "Defendants' Exhibit, Model of Carpenter's Combined Reaping and Grain Binding Machine of 1863." (Record, page 313.) He afterward saw this machine operated in the harvest of 1865, on Beverley Jefferson's farm east of Madison. (Record, page 314.)

Mr. Mills testified that his age was 75 years, that he resided in Madison, that he had known Stephen D. Carpenter since 1850 or 1851, and that in the years 1862, 1863, 1864 and 1865 he was president of a bank (Record, page 321); that he purchased of Stephen D. Carpenter, in 1865, according to his best recollection and belief, an interest in a grain binding machine; that he first saw Mr. Carpenter with such a machine in the latter part of 1864, and that in the year 1865, after he had taken an interest with Mr. Carpenter in his machine, a new machine was built in the summer of 1865. This was tried on a farm owned by a man named Warren, living west of Madison (Record, pages 322 and 323); that the binder upon this machine was movable or adjustable upon the harvester frame, so as to bring the wire around as near the center of the bundle as practicable for the various lengths of long and short grain: "The Model, 'Defendants' Exhibit, Model of Carpenter's Combined Grain Binding Machine of 1863,' substantially represents the first machine that I saw of Carpenter's." (Record, page 324.)

The witness, Horace A. Tenney, testified that he was 65 years of age; that he had resided in Madison since 1846; that he first became acquainted with Carpenter in 1850. He saw Mr. Carpenter's machine tested in the month of September, 1863, on the Phi. Young farm near Madison. (Record, page 337.) He identified "Defendants' Exhibit, Model of Carpenter's Combined Reaping and Grain Binding Machine of 1863" as a correct representation of a machine which he then saw. He again saw Carpenter's machine in the year 1864. This was an elevator machine of the type of the Marsh Harvester. (Record, page 338.)

Steven V. Shipman testified, that he saw Carpenter's machine working on the farm of N. W. Dean, near Madison, in 1864. (Record, page 354.) "I saw General Simeon Mills there, Mr. Carpenter, James Hill, (Jimmie Hill) as I recollect now. He was the cashier of the bank of Madison. There were some others, whose names I do not remember."

This testimony, taken together, tended to prove then, existence of the Carpenter machine, constructed as he described, in the summer or fall of 1863, its use exprimentally in the month of October, 1863, the construction and use of another machine embodying the device, in 1864, its exhibition at the fair of the Wisconsin State Agricultural Society, at Janesville, in 1864, and its use on several farms, in the years 1864, 1865 and 1866, near Madison.

To rebut this testimony, and particularly to rebut the testimony as to the use of the machine on the Warren farm, where, according to Mr. Carpenter, it was used to cut rye in 1864, the complainants called as a witness, William L. Warren, who was 35 years of age and who resided on his father's farm near Madison, about three miles west of the city, in 1868. He resided there during his whole life time, with slight exceptions. He knew Mr. Carpenter, (Record, pages 397 and 398), and saw him with a grain reaping and binding machine on his father's farm, in June, 1868. Mr. Carpenter was there with Simeon Mills and several other parties. They cut some grain, rye, on the farm, at that time. He was able to fix the date at which Mr. Carpenter and his companions came out to cut this piece of grain by the fact that his aunt's death occurred in the May preceding, and at that time his parents went to reside with his uncle. He was a boy and had a horse which on the day that his aunt died was three years old, and Mr. Mills at that time offered him a thousand dollars for the horse. He owned the horse still at the time he gave his testimony, and remembered clearly the circumstance of Mr. Mills and Mr. Carpenter's being there with the machine, and the offer for the horse being made at that time. (Record, page 398.) This testimony shows conclusively that the experiments upon the Warren farm were at least three years later than the testimony heretofore cited on the part of defendants would seem to indicate.

Mr. Shepard L. Sheldon, a dealer in agricultural machinery at Madison, testified (Record, page 144), that he sold Mr. Carpenter a Marsh harvester for use in devising his improvements in binding mechanism, in the summer of 1867. (Record, page 414.)

Joseph Jaquisch testified (Record, page 418), that his father transported a machine, for Stephen D. Carpenter, to the Phi. Young farm, to experiment on some grain, in the fall of 1865; thus contradicting Carpenter's testimony that this was in the fall of 1863.

Mr. William Vroman testified (Record, page 425), that about the 1st of October, 1865, he rented a farm to William Warren, the same being near Madison; that prior to that time Mr. Warren lived on a farm several miles distant, and that he remained there for two years and then went away. He further identifies the time by the fact that a previous tenant gave him a note for $50 on the day he left, which note still remained unpaid. The note was produced and copied in the Record, being dated October 9th, 1865.

The most convincing testimony of all in relation to the date of the Carpenter invention was the photograph shown and identified by Carpenter as that of the machine used in 1865. In relation to this photograph, complainants called Ernst Mueller, who was 49 years of age, was a supervisor and an alderman, and had lived in that location for 32 years. He recognized the objects in the background of the photograph as his own house and barn that was at one time on the back of his lot, and the objects near them, including a large chimney in an old-fashioned cooper shop. The chimney and cooper shop were built by the witness. (Record, page 427.) This shop and chimney were built in April and May, 1868. The property was bought by the witness from H. B. Claflin & Company, of New York City, in April of 1868. He build the shop after the time that he received a deed for the property. At the time that he bought this lot, he paid $400 cash, and gave a mortgage for $900 in addition upon the same property. Both were made out on the second day of April, 1868. The mortgage has been since paid, and was produced, covering the southwest half of lot 17, and all of lot 18, in block 147, in the City of Madison, Dane County, Wisconsin. There was no building where his shop was erected before he bought the property. The deed of the property he could not find. The mortgage was offered in evidence and marked "Complainants' Exhibit, Mueller Mortgage." A photograph of the premises as they were at the time of the testimony was also offered in evidence and marked "Complainants' Exhibit, Cooper Shop Photograph." (Record, page 430.)

Charles F. Bierderstedt, another witness produced by the complainants, testified that his age was 51 (Record, page 431); that he was a store-keeper and had lived in Madison since 1860; had lived where he then resided since 1866, and that his residence was not quite one block from Ernst Mueller's house and cooper shop. This property was purchased on the fifth of October, 1866, being lots 8 and 9, in block 148, Madison, Dane County, Wisconsin. He produced his deed, which was a copy, and put in evidence as "Complainants' Exhibit, Bierderstedt Deed," being dated October 5, 1866. He recognized "Complainants' Exhibit, Cooper Shop Photograph," as the cooper shop of Ernst Mueller, and recollected that it was built, he thought, in 1868. (Record, page 432.) He saw the Carpenter machine tried on the Beverley Jefferson farm in August, 1868. (Record, page 433.)

Richard D. Frost, another witness called by the complainants, testified that he was acquainted with S. D. Carpenter, and had known him more than 20 years. He attended the trial of the Carpenter binder on N. W. Dean's farm, four or five miles from Madison, and this trial was in 1868. (Record, page 439.)

James L. Hill, another witness called by the complainants, testified that he was 51 years old; that he knew S. D. Carpenter; that he was teller in the State Bank at Madison until 1860, and then was cashier of the Bank of Madison, and afterwards president. While he was cashier of the Bank of Madison Mr. Simeon Mills was presi-

dent. In relation to the purchase of the interest in Mr. Carpenter's patent by Mr. Mills, Mr. Hill testified as follows (Record, page 444):

"Q. 6. Will you state what that business was, when it commenced, how it commenced, and when it ended, taking pains to give a minute and complete history of the whole transaction or series of transactions in relation thereto?

A. It was an interest in a reaper and binder patent. My earliest recollection of any interest that I took in it was in seeing the binder-head, that which he at that time called a copper-head, and having it explained to me by Mr. Carpenter. My recollection is that I went with him about the same time and saw a machine for harvesting and binding just back of his house. I had a conference with Mr. Mills as to our purchasing an interest in it, which we did, but that machine was not entirely perfect. My recollection is this machine was taken to the machine shop down to the marsh, and there were changes made; I don't remember just what they were. I think that this was in the spring of 1867; that we worked upon that machine during the summer, or that Mr. Carpenter did; had a trial in the grain with it on the farm of Mr. Dexter Curtis that fall; that the machine was taken back to the shop and another change made that winter in the machine shop. In giving these dates I will have to refer to some minutes that I have here as to the trial that we had at that fall, at Mr. Curtis', which occurred on the 19th of August, 1867. My recollection is that the machine was taken back to the machine shop, and that during that winter we worked upon the machine there—Mr. Carpenter did; also that we purchased the shop in '67.

Q. 7. What date in 1867 did you purchase the shop?

A. I think we purchased it in November.

Q. 8. Won't you state, Mr. Hill, at what time you acquired the interest in the patent right which you have spoken of?

A. My recollection is and belief that it was the spring of '67.

Q. 9. Who, if any one, was interested with you in acquiring that interest?

A. Mr. Mills and myself.

Q. 10. What was Mr. Mills' full name?

A. Simeon Mills.

Q. 11. What interest did you and Mr. Mills acquire in Mr. Carpenter's invention?

A. I am unable to say.

Q. 12. What was the consideration for that interest?

A. I think we paid him $4,000 for it.

Q. 13. What were the comparative interests of yourself and Mr. Mills?

A. We were equally interested.

Q. 14. Was the arrangement under which you acquired an interest a written or verbal one?

A. It was a written one, I think.

Q. 15. Do you know where that written agreement is now?

A. I do not, sir.

Q. 16. Where was it the last that you knew of it?

A. I think that it was in the possession of Mr. Mills.

Q. 17. Were you to do anything else, or pay anything else, beside the $4,000 which you state you paid Mr. Carpenter for the interest in the invention which you and Mr. Mills purchased?

A. We were to bear the expenses of these improvements, changes in perfecting the machines, as I remember.

Q. 18. Do you recollect anything about the purchase of a Marsh harvester by yourself and Mr. Simeon Mills and Mr. S. D. Carpenter in this connection?

A. I think we purchased one, sir.

Q. 19. At what period?

A. In 1867.

Q. 20. Have you any means by which you fix the date at which yourself and Mr. Mills embarked in this enterprise with Mr. Carpenter?

A. I think I have, sir; yes, sir.

Q. 21. What is it?

A. I think it was subsequent to my return from Europe, in May, '67; very soon thereafter, I should say.

Q. 22. Anything else?

A. I remember that our first trial which we had was the Curtis farm, and that was the first season that we tried it, and I am very certain that we did not work or was not interested any season in it without a trial, and as that trial occurred in that year I am very certain it was in 1867.

Q. 23. Have you any other means of fixing the dates at which the transactions between yourself, Mr. Mills and Mr. Carpenter occurred?

A. Yes, sir.

Q. 24. What is it?

A. The records made upon our books and certain payments in money appertaining to the transaction and of the payment to Mr. Carpenter.

Q. 25. You refer to the books of the Bank of Madison?

A. Yes, sir.

Q. 26. In that bank yourself and Mr. Simeon Mills were the sole stockholders?

A. Yes, sir.

Q. 27. Do those books contain an account of the payments by yourself and Mr. Mills on account of this investment in Mr. Carpenter's invention?

A. They do.

Q. 28 Under what name or account were those transactions kept in those books?

A. S. Mills & Co., and also some few transactions as profit and loss charges.

Q. 29. State whether or not Mr. S. D. Carpenter was a depositor in your bank; and if so, during what years he kept an account with you?

A. He was a depositor and I can't state definitely all the years. He had an account there in 1867, and I think for some years previous.

Q. 31. By whom were the books of the bank kept during the years 1866, 1867, 1868 and 1869?

A. By our book-keeper, Mr. Frederick Dietrich.

Q. 32. Are you well acquainted with his handwriting?

A. I am.

Q. 33. Where is he now?

A. I have been told that he was dead.

Q. 34. Turning to the account of S. D. Carpenter with the Bank of Madison, do you find any entry showing when the $4,000 that you refer to in your testimony was paid by yourself and Mr. Mills?

A. I do.

Q. 35. Under what date is that entry?

A. Nov. 5th, 1867.

Q. 36. In what book do you find that entry?

A. Progressive ledger.

Q. 37. Of what?

A. Of the Bank of Madison.

Q. 38. Under whose charge and direction were those books kept?

A. Mine.

Q. 39. State what the character of the entries in those books is as to their justice, correctness, fullness and accuracy.

A. I believe them to be full, correct and accurate.

Q. 40. State what the date of the entries as recorded in those books is, with relation to the transactions therein mentioned?

A. I think they were made at the same time.

Q. 41. You think the entries were made at the same time with the transactions?

A. Yes, sir.

Q. 42. What is the entry to which you refer?

A. An entry of credit to "S. D. Carpenter, $4,000, deposited by S. Mills & Company." He has abbreviated it "dep," standing for "deposit."

Q. 43. Is that the original entry?

A. No, sir.

Q. 44. From what is that entry in the progressive ledger made?

A. From the cash book.

Q. 45. Will you look at the cash book of the Bank of Madison and see if you find the corresponding entry?

A. Yes, sir.

Q. 46. Do you find it there?

A. I do.

Q. 47. Under what date is that entry?

A. November 5th, 1867.

Q. 48. Will you read the entry as it appears under that date?

A. I find an entry of "S. Mills & Co. p'd (abbreviated paid) to S. D. Carpenter, no C. (abbreviated no check), $4,000."

Q. 49. What is that book containing that entry?

A. It is the cash book of the Bank of Madison.

Q. Under whose direction was that book kept?

A. Under mine."

Mr. Hill further testified (Record, page 457) that Mr. Simeon Mills was not interested with Mr. Carpenter in his binder, prior to Mr. Mills obtaining an interest in it also, and that he consulted with Mr. Mills before either was interested in it, and they became interested in it at the same time. The Record, pages 452 to 456, contains the entries in the books of the bank relating to the business of the development of this binder, and the account was closed the first of First of January, 1868, by the total amount of expenditures being charged to profit and loss. It therefore appears conclusively, from the record of the bank's books that the period during which Mr. Mills was interested with Mr. Carpenter, was during the year 1867, fully two years later than the statements by Mr. Carpenter and the other witnesses of the defendants upon this subject.

The dates of manufacture of the machine were further shown by the testimony of Andrew J. Pierce, W. H. Grinnell, William Butterfield, Nathan B. Carr and Jacob Esser, found in the Record at pages 405 to 487, all of them testifying to the various dates of trials and steps of the manufacture of the machine, as being at least two years later than the testimony of Mr. Carpenter and the other witnesses of the defendants upon that subject.

A conclusive piece of evidence in regard to the date of the exhibit at the state fair at Janesville was furnished by the testimony of Mr. Clinton Babbitt (Record, page 487), who testified that he resided at Beloit, Wisconsin; that he was secretary of the State Agricultural Society of the State of Wisconsin, and had the custody of all its books, records and papers. The society held no fairs at all in the years 1861, 1862 and 1863. The fairs of 1864, 1865 and 1866 were held at Janesville. (Record, page 487.) The books containing original entries for premiums at the fairs of 1864, 1865 and 1866 were in the witness's possession. (Record, page 488.) No entry was made by Stephen D. Carpenter for exhibition at the fair of the society in 1864. An entry of a reaper, mower and raker was made for the fair of 1865 by Stephen D. Carpenter. (Record, page 488.) Mr. Carpenter was not a member of the committee having charge of the awards in the class of Automatic Grain Binders in the years 1864, 1865 and 1866. "There were no grain binders exhibited at the society's fair held in 1865, according to the books of the society. In 1866 there was an entry by Mr. Carpenter for the society's fair held that year, as appears by the books of the society." (Record, page 489.)

To further show the dates of construction of Mr. Carpenter's devices, complainants called C. W. Wente as a witness, who testified

that he was 67 years old (Record, page 493), that he knew Mr. Carpenter, and that in the year 1865, he worked on a machine for Mr. Carpenter at the shop of Mr. Allis, in Milwaukee. He made patterns for a machine which corresponds with the machine described by Carpenter as having been made in 1863. In 1866 Mr. Carpenter took the witness (Record, pages 495 and 496) and another pattern-maker named Campbell, to Racine, and there they worked upon a pattern for a screw which caused a rake to travel back and forth, the same being such a device as Carpenter describes as being employed in his 1863 machine. (Carpenter's testimony, Record, pages 358 and 359; Wente's testimony, Record, page 496.) In 1868 (Record, pages 497 and 498) witness worked for Mr. Carpenter at Madison, where Mr. Carpenter was changing a Marsh harvester into a binder.

Complainants further called George Campbell, the witness alluded to in the evidence of the witness, Wente, just mentioned, who testified (Record, pages 507 and 508) in corroboration of the witness Wente's testimony.

The complainants further called as a witness, James McDonald, another pattern-maker, who testified (Record, pages 512 and 513) to substantially the same matter as was testified to by the witnesses Wente and Campbell; and the witness, Joseph McDonald, also testified to substantially the same matter. (Record, pages 515, 516 and 517.)

Carpenter, in his testimony (Record, page 383) testified that in 1868 he was building a machine at either De Pere or Fond du Lac. The testimony of Washington Wilke (Record, page 518), shows that he came to Hiner & Company's place of business at Fond du Lac, in 1870, and that he, Mr. Pier and Mr. Galloway, built a machine in the year 1870. This testimony is based upon the records of the company and is impregnable. Further, Mr. Carpenter testified that a field trial was held at Fond du Lac in 1867 or 1868. The field was south of the town. It was a low-down machine. (Record, page 390.) The testimony of Mr. Jesse C. Wedge shows that this trial was in 1870. He recollects the date, knows that it was the 26th of July, 1870, because on that date he made an entry in his diary, as follows:

"July 26th, 1870, in P. M. went to see Carpenter's new self-binding reaper," etc. "This book is a diary which I kept in the year 1870. I have kept diaries for 40 years and have them at home now. This memorandum I have read was made on that day, July 26th, 1870." Mr. Wedge knew Carpenter well and was interested in the working of the machine. He was the secretary and treasurer of the Fond du Lac Wheel & Seeder Company at the time he gave his testimony.

It will be seen from the foregoing, that there is an overwhelming amount of testimony based upon record dates, fortified by the recollection of a large number of witnesses, to the effect that the Carpenter device was of much later origin, at least two or three years, than the testimony of Carpenter and his friends would indicate. In

fact, as before indicated, the testimony is so convincing upon this point that no attempt was made in the court below to use the Carpenter defense. It will be recollected that Carpenter testified (Record, page 370) that he built a machine at Mr. Falvey's shop in 1864, and that the 1864 machine was the first elevator machine which he built. The testimony of Thomas H. St. George, who was chief clerk of the State Department at Madison at the time he testified, and who was for several years in business at Racine, and was familiar with the books of Thomas Falvey, shows (Record, pages 536 and 537) that there were no such transactions had between Thomas Falvey and S. D. Carpenter in 1864, and that there were no transactions of any consequence, except in 1865. Mr. St. George is fully corroborated by the testimony of Sinai J. Falvey. (Record, page 542.) She was the widow of Thomas Falvey, knew Mr. Carpenter who was a friend of her husband, but never saw him until 1865, and no work was done by Mr. Falvey for him until 1865. The 1865 machine which was built at Falvey's, is described by Mr. St. George as being constructed like the first machine which Carpenter built, according to his recollection.

This completes what would appear to be an absolutely perfect chain of evidence, founded on the recollection of numerous witnesses and numerous records, showing conclusively that the real date of Carpenter's invention was at least two years later than alleged and testified to by Carpenter, Mills, Baker, Tenney and Shipman. Carpenter says that his first machine and first trial were in 1863. The books of Thomas Falvey at Racine do not show that this machine was made in 1865. The recollection of all the other witnesses is that the trial of the Phi. Young farm was in 1865. Carpenter says that he exhibited the machine in 1864 and 1865 at the State Fair in Janesville. The records of the State Agricultural Society show that there was no entry made of any machine by Carpenter, until 1865, when his first machine was exhibited; and Mills stated that he (Mills) purchased an interest in the machine, and they together attempted to develop it in 1865. The testimony of James L. Hill, who was the cashier of the bank of which Mills was president, and the books of the bank, show that no purchase of interest by Mills was made until two years later than Carpenter asserts; and Hill's testimony is fully corroborated by the records in the books of the bank. Carpenter testifies that the photograph put in evidence was taken in 1865. It is conclusively shown from the background of the photograph that the picture could not have been taken prior to the summer of 1868, the building, or cooper shop, with a large chimney, and the rear portion of the house shown in the background behind the machine, not having been erected until after the purchase of the lot upon which they stand, in 1868. The date of this purchase is shown by the production of the mortgage given back for purchase money and by the production of the records.

The testimony as to the date of the invention by James H. Gordon of the complainants' device is full, explicit and uncontradicted, no

contest upon that point existing. It consists in the testimony of John H. Gordon (Record, page 595), that he saw the complete model in 1862 or 1863; the large machine being made in 1864 (Record, page 598); also in the testimony of James F. Gordon (Record, page 607), that he made his first model in 1862, made his first full-sized machine in 1864, and in June, 1864, filed his caveat. The caveat is in evidence and is found in Record of Stipulations and Additions to Record, page 69. As this caveat was filed a year before Carpenter's first machine the evidence of Gordon's priority is ample and conclusive. No allusion has been made in this brief to a large amount of evidence in the shape of newspaper accounts of the various trials testified to by the witnesses for the complainants, which were put in to identify the time at which these various trials took place. They are found at pages 369, 370, 371, 375, 376, 377 and 378, of the Record of Stipulations and Additions to Record. They fully identify the dates of the trials at the Dexter Curtis farm, the date of the exhibit at the State Fair in 1867, and various other trials, as having occurred in the years 1867 and 1868, instead of at the dates testified to by Carpenter and his associates. Carpenter, Mills, Tenney, Baker and Shipman testify to the first machine as having been built and tried in the fall of 1863, to a machine having been built in 1864 at the shops of Thomas Falvey, in Racine, to the contract with Simeon Mills by which he was to furnish money for the development of the machine, as having been made in 1865, and to the development of the machine by them in partnership as having commenced at that time; that further machines were made in 1867 and 1868, at Milwaukee, Fond du Lac, De Pere, and elsewhere, etc.; and that the photograph put in evidence, was taken in 1865, showing the complete device. Carpenter admits that the 'key' to his dates is the recollection of Mr. Mills. The testimony of a large number of witnesses on the part of the complainants fixes the dates of these various events as at least two years later than the testimony of Mr. Carpenter, viz., that Carpenter's machine was first built not earlier than 1865; that the contract with Mills was not earlier than 1867, etc., there being a difference of about two years in the dates given by the witnesses of the different parties. There is a very large amount of documentary testimony in favor of the complainants. There is no documentary evidence in favor of the defendants. Their testimony is based upon recollection only, and they were testifying at a date nearly twenty years later than the occurrence. They had meanwhile had no business interest in the matters as to which they were testifying. The records of the State Agricultural Society at Madison show that the exhibits claimed by Carpenter to have been made at the State Fair, could not have been made by him. The records of the State Bank at Madison, in which Mills and Hill were respectively president and cashier, show conclusively that the transactions which Carpenter claimed were in 1865, must have been in 1867. The testimony of St. George and Mrs. Falvey show conclusively that the

transactions which Carpenter claims to have had with Falvey in 1864 were not had until 1865, and the books of Falvey fully corroborate this. The books of Hiner & Company at Fond du Lac, and the memorandum book of J. C. Wedge, show conclusively that the business which Carpenter recollected as being transacted at Fond du Lac in 1868 or 1869, was not transacted until 1870; and most convincing of all, the photograph claimed by Carpenter to have been taken in 1865, shows by the background of the picture itself that it could not have been taken until after April, 1868, that background consisting of an old-fashioned cooper shop, a chimney, and the rear of a house, which were not constructed until the present owner had purchased the lot, and the lot was not purchased from Claflin & Company, of New York City, who owned it, until April, 1868. The mortgage and record of this transaction are in evidence; and the contractor who built this building, Jacob Esser, (Record, page 487) produced his book and showed the dates at which he built the chimney in the identical shop shown in the photograph, from the entries made in his book, which showed conclusively that the chimney was commenced on the 18th of April, 1868, and finished on the 21st of April, 1868. He fully identified the picture in the photograph and stated that there was no other such chimney in the City of Madison. This may well be believed, as the chimney was about 12 x 14 feet square and could only be used or designed for the purpose indicated, a cooper shop fire. Taking it all in all, it may well be doubted whether a defense ever was or ever could be more thoroughly demolished by absolutely indisputable testimony than that of the Carpenter machine in these causes.

We respectfully submit that the well-known rule of law which requires testimony establishing an anticipation to be beyond a reasonable doubt, entirely protects the complainants in these causes, and we respectfully insist that the Carpenter device cannot be considered by the Court as proven by the defendants in anywise.

ESEK COWEN,
Counsel for Complainants.

Transcripts

of

Records

1893

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Supreme Court U. States

150 U. S.

47